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Man, Economy, and State

A TREATISE ON ECONOMIC PRINCIPLES

by

MURRAY N. ROTHBARD

VOLUME II

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8

Production: Entrepreneurship and Change

1. *Entrepreneurial Profit and Loss*

Having developed in Volume I our basic analysis of the market economy, we now proceed to discuss more dynamic and specific applications, as well as the consequences of intervention in the market.

In the evenly rotating economy, there are only two ultimate categories of producers' prices and incomes: interest (uniform throughout the economy), and "wages"—the prices of the services of various labor factors. In a changing economy, however, wage rates and the interest rate are not the only elements that can change. Another category of both positive and negative income appears: *entrepreneurial profit and loss.* We shall concentrate on the *capitalist-entrepreneurs,* economically the more important type of entrepreneur. These are the men who invest in "capital" (land and/or capital goods) used in the productive process. Their function is as we have described: the advance of money to owners of factors and the consequent use of the goods until the *more nearly present* product is later sold. We have worked out the laws of the ERE in detail: factor prices will equal DMVP, every factor will be allocated to its most value-productive uses, capital values will equal the sums of the DMVP's, the interest rate will be uniform and governed solely by time preferences, etc.

The difference in the dynamic, real world is this. None of these future values or events is known; all must be *estimated,* guessed at, by the capitalists. They must advance present money in a speculation upon the unknown future in the expectation that the future product will be sold at a remunerative price. In the real world, then, quality of judgment and accuracy of forecast play an enormous role in the incomes acquired by capitalists. As a result of the arbitrage of the entrepreneurs, the *tendency* is always toward the ERE; in consequence of ever-changing reality, changes in value scales and resources, the ERE never arrives.

The capitalist-entrepreneur buys factors or factor services in the present; his product must be sold in the future. He is always on the alert, then, for discrepancies, for areas where he can earn more than the going rate of interest. Suppose the interest rate is 5%; Jones can buy a certain combination of factors for 100 ounces; he believes that he can use this agglomeration to sell a product after two years for 120 ounces. His *expected* future return is 10% per annum. If his expectations are fulfilled, then he will obtain a 10% annual return instead of 5%. The difference between the general interest rate and his actual return is his *money profit* (from now on to be called simply "profit," unless there is a specific distinction between money profit and psychic profit). In this case, his money profit is 10 ounces for two years, or an extra 5% per annum.

What gave rise to this realized profit, this *ex post* profit fulfilling the producer's *ex ante* expectations? The fact that the *factors of production in this process were underpriced and undercapitalized*—underpriced in so far as their unit services were bought, undercapitalized in so far as the factors were bought as wholes. In either case, the general expectations of the market erred by underestimating the future rents (MVP's) of the factors. This particular entrepreneur saw better than his fellows, however, and acted on this insight. He reaped the reward of his superior foresight in the form of a profit. His action, his recognition of the general undervaluation of productive factors, results in the eventual elimination of profits, or rather in the tendency toward their elimination. By extending production in this particular process, he increases the demand for these factors and raises their prices. This result will be accentuated by the entry of competitors into the same area, attracted by the 10% rate of return. Not only will the rise in demand *raise* the prices of the factors, but the increase in output will *lower* the price of the product. The result will be a tendency for a fall in the rate of return back to the pure interest rate.

What function has the entrepreneur performed? In his quest for profits he saw that certain factors were underpriced vis à vis their potential value products. By recognizing the discrepancy and doing something about it, he shifted factors of production (obviously nonspecific factors) from other productive processes to this one. He detected that the factors' prices did not adequately reflect their potential DMVP's; by bidding for, and hiring, these factors, he was able to allocate them from production of lower DMVP to production of higher DMVP. He has served the consumers better by anticipating where the factors are more valuable. For the greater value of the factors is due solely to their being more highly demanded by the consumers, i.e., being better able to satisfy the desires of the consumers. That is the meaning of a greater discounted marginal value product.

It is clear that there is no sense whatever in talking of a going *rate of profit.* There is no such rate beyond the ephemeral and momentary. For any realized profit tends to disappear because of the entrepreneurial actions it generates. The basic *rate,* then, is the *rate of interest,* which does not disappear. If we start with a dynamic economy, and if we postulate given value scales and given original factors and technical knowledge throughout, the result will be a wiping out of profits to reach an ERE with a pure interest rate. Continual changes in tastes and resources, however, constantly shift the final equilibrium goal and establish a new goal toward which entrepreneurial action is directed —and again the final tendency in the ERE will be the disappearance of profits. For the ERE means the disappearance of uncertainty, and profit is the outgrowth of uncertainty.

A grave error is made by a host of writers and economists in considering only profits in the economy. Almost no account is taken of *losses*. The economy should not be characterized as a "profit economy," but as a "profit and loss economy." [1]

A *loss* occurs when an entrepreneur has made a poor estimate of his future selling prices and revenues. He bought factors, say, for 1,000 ounces, developed them into a product, and then sold it for 900 ounces. He erred in not realizing that the factors were *overpriced* and *overcapitalized* on the market in relation to their discounted marginal value products, i.e., to the prices of his output.

Every entrepreneur, therefore, invests in a process because he expects to make a profit, i.e., *because he believes that the market has underpriced and undercapitalized the factors* in relation to their future rents. If his belief is justified, he makes a profit. If his belief is unjustified, and the market, for example, has really *overpriced* the factors, he will suffer losses.

The nature of loss has to be carefully defined. Suppose an entrepreneur, the market rate of interest being 5%, buys factors at 1,000 and sells their product for 1,020 one year later. Has he suffered a "loss" or made a "profit"? At first, it might seem that he has not taken a loss. After all, he gained back the principal plus an extra 20 ounces, for a 2% net return or gain. However, closer inspection reveals that he could have made a 5% net return anywhere on his capital, since this is the going interest return. He could have made it, say, investing in any other enterprise or in lending money to consumer-borrowers. In this venture he did not even earn the interest gain. The "cost" of his investment, therefore, was not simply his expenses on factors—1,000—but also his forgone opportunity of earning interest at 5%, i.e., an additional 50. He therefore suffered a loss of 30 ounces.

The absurdity of the concept of "rate of profit" is even more evident if we attempt to postulate a *rate of loss*. Obviously, no meaningful use can be made of "rate of loss"; entrepreneurs will be very quick to leave the losing investment and take their capital elsewhere. With entrepreneurs leaving the line of production, the prices of the factors there will drop and the price of the product will rise (with reduced supply), until the net return in that branch of production will be the same as in every branch, and this return will be the uniform interest rate of the ERE. It is clear, therefore, that the process of equalization of rate of return throughout the economy, one that results in a uniform rate of interest, *is the very same process that brings about the abolition of profits and losses in the ERE.* A real economy, in other words, where line A yields a net return of 10% to some entrepreneur, and line B yields 2%, while other lines yield 5%, is one in which the rate of interest is 5%, A makes a pure profit of 5%, and B suffers a pure loss of 3%. A correctly estimated that the market had underpriced his factors in relation to their true DMVP's; B had incorrectly guessed that the market had underpriced (or, at the very least, correctly priced) *his* factors, but found to his sorrow that they had been overpriced in relation to the uses that he made of the factors. In the ERE, where all future values are known and there is therefore no underpricing or overpricing, there are no entrepreneurial profits or losses; there is only a pure interest rate.

In the real world, profits and losses are almost always intertwined with interest returns. Our separation of them is conceptually valid and very important, but cannot be made easily and quantitatively in practice.

Let us sum up the essence of an evenly rotating economy. It is this: all factors of production are allocated to the areas where their discounted marginal value products are the greatest. These are determined by consumer demand schedules. In the modern world of specialization and division of labor, it is almost always the consumers alone who decide, and this in effect excludes the capitalists, who rarely consume more than a negligible amount of their own products. It is the consumers, then, given the "natural" facts of stocks of resources (particularly labor and land factors), who make the decisions for the economic system. The consumers, through their buying and abstention from buying, decide how much of what will be produced, at the same time determining the incomes of all the participating factors. And every man is a consumer.

One obvious exception to this "rule" occurs when either capitalists or laborers have strong preferences or dislikes for a particular line of production. The equilibrium rate of return in the ERE for a strongly disliked line will be considerably higher than the uniform rate, and the equilibrium rate of return for a strongly liked line will be lower. These preferences, however, have to be strong enough to affect the investment or productive actions of a considerable number of potential investors or laborers in order to register as a change in the rate of return.

Do profits have a social function? Many critics point to the ERE, where there are no profits (or losses) and then attack entrepreneurs earning profits in the real world as if they were doing something mischievous or at best unnecessary. Are not profits an index of something wrong, of some maladjustment in the economy? The answer is: Yes, profits are an index of maladjustment, but in a sense precisely opposed to that usually meant. As we have seen above, *profits are an index that maladjustments are being met and combatted by the profit-making entrepreneurs.* These maladjustments are the inevitable concomitants of the real world of change. A man earns profits only if he has, by superior foresight and judgment, uncovered a maladjustment—specifically an undervaluation of certain factors by the market. By stepping into this situation and gaining the profit, he calls everyone's attention to that maladjustment and sets forces into motion that eventually eliminate it. If we must condemn anyone, it should not be the *profit-making* entrepreneur, but the one that has suffered losses. For losses are a sign that he has added further to a maladjustment, through allocating factors where they were overvalued as compared to the consumers' desire for their product. On the other hand, the profit-maker is allocating factors where they had been undervalued as compared to the consumers' desires. The greater a man's profit has been, the more praiseworthy his role, for then the greater is the maladjustment that he alone has uncovered and is combatting. The greater a man's losses, the more blameworthy he is, for the greater has been his contribution to maladjustment.[2]

Of course, we should not be too hard on the bumbling loser. He receives his penalty in the form of losses. These losses drive him from his poor role in production. If he is a consistent loser wherever he enters the production process, he is driven out of the entrepreneurial role altogether. He returns to the job of wage earner. In fact, the market tends to reward its efficient entrepreneurs and penalize its inefficient ones proportionately. In this way, consistently provident entrepreneurs see their capital and resources growing, while consistently imprudent ones find their resources dwindling. The former play a larger and larger role in the production process; the latter are forced to abandon entrepreneurship altogether. There is no inevitably self-reinforcing tendency about this process, however. If a formerly good entrepreneur should suddenly made a bad mistake, he will suffer losses proportionately; if a formerly poor entrepreneur makes a good forecast, he will make proportionate gains. The market is no respecter of past laurels, however large. Moreover, the size of a man's investment is no guarantee whatever of a large profit or against grievous losses. Capital does not "beget" profit. Only wise entrepreneurial decisions do that. A man investing in an unsound venture can lose 10,000 ounces of gold as surely as a man engaging in a sound venture can profit on an investment of 50 ounces.[3]

Beyond the market process of penalization, we cannot condemn the unfortunate capitalist who suffers losses. He was a man who voluntarily assumed the risks of entrepreneurship and suffered from his poor judgment by incurring losses proportionate to his error. Outside critics have no right to condemn him further. As Mises says:

> Nobody has the right to take offense at the errors made by the entrepreneurs in the conduct of affairs and to stress the point that people would have been better supplied if the entrepreneurs had been more skillful and prescient. If the grumbler knew better, why did he not himself fill the gap and seize the opportunity to earn profits? It is easy indeed to display foresight after the event.[4]

2. *The Effect of Net Investment*

Having considered the ERE and its relation to specific entrepreneurial profit and loss, let us now turn to the problem: When will there be *aggregate* profits or losses in the economy? This is connected with the question: What is the effect of a change in the level of aggregate saving or investment in the economy?

Let us begin with an economy in the equilibrium depicted in chapters 5 and 6 above. Production occurs in processes up to six years in total length; total gross income is 418 gold ounces, gross savings-investment is 318 ounces, total consumption 100 ounces, net savings-investment is 0. Of the 100 ounces of income, 83 ounces of net income are earned by land and labor owners, 17 ounces by capital owners. The production structure remains constant because the natural rates of interest coincide, and the resulting price spreads conform to the aggregate of individual time-preference schedules in the economy. As Hayek states:

> Whether the structure of production remains the same depends entirely upon whether entrepreneurs find it profitable to reinvest the usual proportion of the return from the sale of the product in turning out intermediate goods of the same sort. Whether this is profitable, again, depends upon the prices obtained for the product of this particular stage of production on the one hand and on the prices paid for the original means of production and for the intermediate products taken from the preceding stage of production on the other. The continuance of the existing degree of capitalistic organization depends, accordingly, on the prices paid and obtained for the product of each stage of production, and these prices are, therefore, a very real and important factor in determining the direction of production.[5]

What happens if, in a certain period, there are now net savings as a result of a lowering of time-preference schedules? Suppose, for example, that consumption decreases from 100 to 80 and that the saved 20 ounces enter the time market. Gross savings have increased by 20 ounces. During the transition period, net saving has changed from 0 to 20; after the new level of saving has been reached, however, there will be a new equilibrium with gross savings equalling 338 and net savings equalling 0. To the superficial, it might seem that all is lost. Has not consumption decreased from 100 to 80 ounces? What, then, will happen to the whole complex of productive activities that rest on final consumption sales? Will this not lead to a disastrous depression for all firms? And how can a *reduced* consumption profitably support an *increased* volume of expenditures on producers' goods? The latter has aptly been termed by Hayek the "paradox of saving," i.e., that saving is the necessary and sufficient condition for increased production, and yet that such investment seems to contain within itself the seeds of financial disaster for the investors.[6]

If we observe the diagram in Fig. 40 above, it is clear that the volume of money incomes to Capitalists_1 will be drastically reduced. Capitalists_1 will receive a total of 80 instead of 100 ounces. The amount that they have to apportion to original factors and to Capitalists_2 is therefore also considerably decreased. Thus, from the side of final consumers' spending, an impetus toward declining money incomes and prices is sent along the production structure. In the meanwhile, however, *another force* has concurrently come into play. The 20 ounces have not been lost to the system. They are in the process of being invested in the economy, their owners ranging throughout the economy looking for maximum interest returns on their investment. The new savings have changed the ratio of gross investment to consumption from 318:100 to 338:80. A "narrower" consumption base must support a larger amount of producers' spending. How can this happen, especially since the lower-rank capitalists must also receive a lower aggregate income? The answer is: in only one way—by shifting investment further up the ladder to the higher-order production stages. Simple investigation will reveal that the only way that so much investment can be shifted from the lower to the higher stages, while preserving uniform (lowered) interest differentials (cumulative price spreads) at each stage, is *to increase the number of productive stages in the economy,* i.e., to lengthen the structure of production. The impact of net saving on the economy, i.e., of increased total savings, is to lengthen and narrow the structure of production, and this procedure is viable and self-supporting, since it preserves essential price spreads from stage to stage. The diagram in Fig. 60 illustrates the impact of net saving.

In this diagram we see the narrowing and the lengthening of the structure of production. The heavy line *AA* outlines the original structure. The bottom rectangle—consumption—is narrowed with the addition of new savings. As we go up in stepwise fashion—the steps in these diagrams accounting for the interest spreads [7]—the new production structure *BB* (its area covered by diagonal lines) becomes relatively less and less narrow compared to the original structure, until it becomes wider in the upper registers, and finally adds new and higher stages.

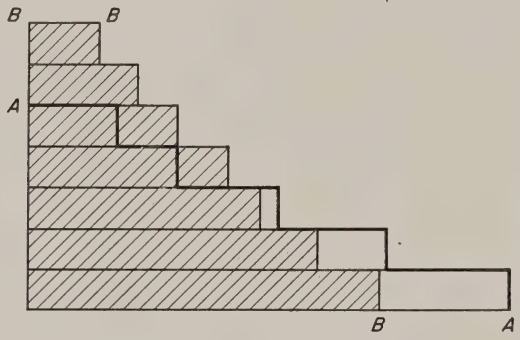


Fig. 60. The Impact of Net Saving

The reader will notice that the steps (differentials between stages) in the new production structure *BB* are considerably narrower than the ones in *AA*. This is not an accident. If the steps in *BB* were of the same width as in *AA*, there would be no lengthening of the structure, and total investment would diminish instead of increase. But what is the significance of the narrowing steps in the structure? On the assumptions on which we have drawn the diagram, it is equivalent to a lowering of the interest spreads, i.e., a lowering of the natural rate of interest. But we have seen above that the consequence of lower time-preference rates in the society is precisely a lowering of the rate of interest. Thus, lowered time preferences mean an increased proportion of savings-investment to consumption and lead to smaller price spreads and an equivalent lowering of the rate of interest.

The lowering of interest spreads may be portrayed by another diagram, as in Fig. 61.

In this diagram, cumulative prices are plotted against stages of production, and the further right we go, the lower the stage of production, until consumption is reached. *AA* is the original curve with the topmost dot representing the highest cumulative price—the one for the final product consumed. The dots next to the left are the lower cumulative prices of the higher stages, and the differences between the dots represent the interest spread and therefore the rate of interest return from stage to stage. *BB* is the curve applicable to the new situation, after saving has increased. Consumption has declined; hence the rightmost dot in *B* is lower than the one in *A*, and the arrow depicts the change. The point next to the left on the *BB* curve is, of course, lower than the rightmost dot, but lower by a smaller amount than the corresponding dot in *AA*, because the lower interest rate signifies a smaller spread between the cumulative prices of the two stages.

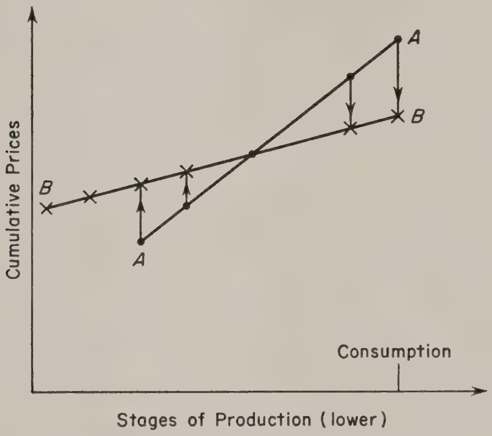


FIG. 61. LOWERING OF INTEREST SPREADS

The next dot to the left, having the same rate of interest return, will be on approximately the same slope. Therefore, since the *BB* curve is flatter then the *AA* curve—because of the lower interest spread—it crosses the *AA* curve and from that point leftward, i.e., in the higher productive stages, its prices are higher than *A*'s. Arrows depict this change as well.

In the previous diagram we saw the effect of additional saving, i.e., positive net savings, on the structure of production and on the rate of interest. Here we see that the change in the rate of interest lessens the spreads of cumulative prices, so that aggregate consumption is lower, the immediate next higher stages are less and less lower, until the lines cross, and the prices in the higher stages are higher than before. Let us consider the price changes in the various stages and the processes by which they occur. In the lower stages, prices fall because of the lower consumer demand and the resulting shift of investment capital from the stages nearest consumption. In the higher stages, on the other hand, demand for factors increases under the impact of the new savings and the shift in investment from the lower levels. The increased investment expenditure in the higher levels raises the prices of the factors in these stages. It is as if the impact of lower consumer demand tends to die out in the higher stages and is more and more counteracted by the increase and shift in investment funds.

The process of readjustment to lower price spreads caused by increased gross saving has been very lucidly described by Hayek. As he states:

> The final effect will be that, through the fall of prices in the later stages of production and the rise of prices in the earlier stages of production, price margins between the different stages of production will have decreased all round.[8]

The changes in cumulative prices in the various sectors will lead to changes in the prices of the particular goods that enter into the cumulation of factors. These factors are, of course, the capital goods, land, and labor factors, and are ultimately reducible to the latter two, since capital goods are produced (and reproduced) factors. It is clear that lower aggregate demand in the lower stages will cause the prices of the various factors there to decline. The *specific* factors will have to bear the brunt of the decline, since they have nowhere else to go. The nonspecific factors, on the other hand, *can* and do go elsewhere—to the earlier stages, where the monetary demand for factors has increased.

The pricing of capital goods is ultimately unimportant in this connection, because it is reducible to the prices of land, labor, and time, and because the slopes of the curves, the interest spread, indicate the mode of pricing of the capital goods. The ultimately important factors, then, are land, labor, and time. The time element has been extensively considered and accounts for the interest spread. It is the land and labor elements that constitute the fundamental resources being shifted or remaining in production. Some land is specific and some nonspecific; some can be used in several alternative types of productive processes; some can be used in only one type. Labor, on the other hand, is almost always nonspecific; very rare indeed is the person who could conceivably perform only one type of task.[9] Of course, there are different *degrees* of nonspecificity for any factor, and the less specific ones will be more readily shifted from one stage or product to another.

Those factors which are specific to only one particular stage and process will therefore fall in price in the later stages and rise in the earlier stages. What of the nonspecific factors, which include all labor factors? These will tend to shift from the later to the earlier stages. At first, there will be a difference in the price of each nonspecific factor; it will be lower in the lower stages and higher in the higher stages. In equilibrium, however, as we have seen time and again, there must be a uniform price for any factor throughout the economy. The lower demand in the lower stages, and the consequent lower price, coupled with the higher demand and higher price in the higher stages, causes the shift of the factor from later to earlier stages. The shift ceases when the price of the factor is again uniform throughout.

We have seen the impact of new saving, i.e., a shift from consumption to investment, on the prices of goods at various levels. What, however, is the *aggregate* impact of a change to a higher level of gross savings on the prices of factors? Here we reach a paradoxical situation. *Net income* is the total amount of money that ultimately goes to factors: land, labor, and time. In any equilibrium situation, net saving is zero by definition (since net saving means a change in the level of gross saving over the previous period of time), and net income equals consumption and consumption alone. If we look again at Fig. 41 above, we see that the total income for original factors and interest can come only from net, rather than gross, income. Let us consider the new ERE *after* the change has taken place to a higher level of saving (ignoring for a moment the relevant conditions *during* the period of change). Gross savings = gross investment has increased from 318 to 338. But consumption has declined from 100 to 80, and it is consumption that provides the net income in the equilibrium situation. Net income is, as it were, the "fund" out of which money prices and incomes are paid to original factors. And this fund has *declined.*

The recipients of the net income fund are the original factors (labor and land) and interest on time. We know that the interest rate declines; this is a corollary of the increased saving and investment in the productive system, caused by lowered time preference. However, the absolute amount of interest *income* is gross investment multiplied by the rate of interest. Gross investment has increased, so that it is impossible for economic analysis to determine whether interest *income* has fallen, increased, or remained the same. Any of these alternatives is a possibility.

What happens to total original-factor income is also indeterminate. Two forces are pulling different ways in a *progressing economy* (an economy with *increasing* gross investment). On the one hand, the total net income money fund is falling; on the other hand, if the interest decline is large enough, it is possible that the fall in interest income will outstrip the fall in total net income, so that total factor income actually increases. For this to occur is possible but empirically highly unlikely.

The one certain prospect is that total net income for factors *and* interest will fall. If the total original-factor income falls, then, since we have implicitly been assuming a given supply of original factors, the prices of these factors, as well as the interest rate, will "in general" also decline.

That the general trend of original-factor incomes and prices may well be downward is a startling conclusion, for it is difficult to conceive of a *progressing* economy as one in which factor prices, such as wage rates and ground rents, steadily *decline*. What interests us, however, is not the course of *money* incomes and prices of factors, but of *real* incomes and prices, i.e., the "goods-income" accruing to factors. If money wage rates or wage incomes fall, and the supply of consumers' goods increases such that the prices of these goods fall even more, the result is a rise in "real" wage rates and "real incomes" to factors. That this is precisely what does happen solves the paradox that a progressing economy experiences falling wages and rents. There may be a fall in money terms (although not in all conceivable cases); but there will always be a *rise in real terms.*

The rise in real rates and incomes is due to the increase in the marginal physical productivity of factors that always results from an increase in saving and investment.[10] The increased productivity of the longer production processes leads to a greater physical supply of capital goods, and, most important, of consumers' goods, with a consequent fall in the prices of consumers' goods. As a result, even if the money prices of labor and land fall, those of consumers' goods will *always* fall farther, so that real factor incomes will rise. That this is always true in a progressing economy can be seen from the following considerations.

At any time, the wage or rent of the service of an original factor of production will equal its DMVP, the discounted marginal value product. This DMVP is equal to the MVP (marginal value product) divided by a discount factor, say d, which is directly dependent on the rate of interest. The MVP, in turn, is approximately equal to the MPP (marginal physical product) of the factor times the selling price, i.e., the final price of the consumers' good product. Hence,

$$\text{Price of factor service} = \frac{\text{MPP} \times P}{d}$$

In this discussion, we are considering the prices of consumers' goods "in general" or in the aggregate. The "real" prices of the original factors equal the money prices divided by the prices of consumers' goods. Strictly, there is no precise praxeological way of measuring these aggregates, or "real" income, based on changes in the purchasing power of money, but we can make qualitative statements about these elements even though we cannot make precise quantitative measurements.

The *real* price of factor service, then, $= \dfrac{\text{MPP} \times P}{d \times P}$

The *P*'s cancel, and the result:

$$\text{Real price of factor service} = \frac{\text{MPP}}{d} \text{ (roughly)}$$

Now the progressing economy consists of two leading features: an increase in the MPP of original factors resulting from more productive and longer production processes, and a fall in the discount or interest rate concomitant with falling time preference and increasing gross investment. Both elements—the increase in MPP and the fall in *d*—impel an increase in the real prices of factor services in a progressing economy.

The conclusion is that in a progressing economy, i.e., in an economy with increases in gross savings and investment, money wages and ground rents may well fall, but *real* wages and rents will rise.[11]

One question that immediately presents itself is: How can the prices of factors decline while the gross income remains the same and gross investment even increases? The answer is that the increase in investment goes into increasing the number of stages, pushing back the stages of production and employing longer production processes. It is this increasing "roundaboutness" that causes every increase in capital—even if unaccompanied by an advance in technological *knowledge*—to lead to higher physical productivity per original factor. The increase in gross investment, in particular, raises the prices of capital goods at the highest stages, encouraging new stages and inducing entrepreneurs to shift factors into this new and flowering field. The larger gross investment fund is absorbed, so to speak, by higher prices of high-order capital goods and by the consequent new stages of turnover of these goods.[12]

3. *Capital Values and Aggregate Profits in a Changing Economy*

Net saving, as we have seen, increases gross investment in the economy. This increase in gross investment at first accrues as profits to the firms doing the increased business. These profits will accrue particularly in the higher stages, toward which old capital is shifting and in which new capital is invested. An accrual of profits to a firm increases, by that amount, the capital value of its assets, just as the losses decrease the capital value. The first impact of the new investment, then, is to cause *aggregate profits* to appear in the economy, concentrated in the new production processes in the higher stages. As the transition to the new ERE begins to take place, however, these profits more and more become *imputed* to the factors for which these entrepreneurs must pay in production. Eventually, if no other interfering changes occur, the result will be a disappearance of profits in the economy, a settling into the new ERE, an increase in real wages and other real rents, and an increase in the real capital value of ground land. This latter result, of course, is in perfect conformity with the previous conclusion that a progressing economy will lead to an increase in the real rents of ground land and a fall in the rate of interest. These two factors in conjunction, both impel a rise in the real capital value of ground land.

Future rises in the real values of rents can be either anticipated or not anticipated. To the extent that they are *anticipated,* the rise in future rents is already accounted for, and discounted, in the capital value of the whole land. A rise in the far future may be anticipated, but will have no appreciable effect on the present price of land, simply because time preference places a very distant date beyond the effective "time horizon" of the present. To the extent that rises in the real rate are *not* foreseen, then, of course, entrepreneurial errors have been made, and the market has undercapitalized in the present price.[13] Throughout the whole history of landholding, therefore, income from *basic land* can be earned in only three ways (we are omitting *improving* the land): (1) through entrepreneurial profit in correcting the forecasting errors of others; (2) as interest return; or (3) by a rise in the capital value to the *first* finder and user of the land.

The first type of income is obvious and not unique. It is pervasive in any field of enterprise. The second type of income is the general income earned by ground land. Because of the market phenomenon of capitalization, income from ground land is largely interest return on investment, just as in any other business. The only unique component of income that ground land confers, therefore, is (3), accruing to the first user, whose land value began at zero and became positive. After that, the buyer of the land must pay its capitalized value. To earn rent on ground land, in other words, a man must either buy it or find it, and in the former case he earns only interest, and not pure rent. The capitalized value can increase from time to time and not be discounted in advance only if some new and unexpected development occurs (or if better knowledge of the future comes to light), in which case the previous owner has suffered an entrepreneurial loss in profit forgone for not having anticipated the new situation, and the current owner earns an entrepreneurial profit.

The only unique aspect to ground land, then, is that it is found and first put on the market at some particular time, so that the *first user* earns pure rent as a result of his initial discovery and use of the land. All later increases in the capital value of the land are accounted for in the value, either as entrepreneurial profits resulting from better forecasting or as interest return.

The first user earns his gain only at first and not at whatever later date he actually sells the land. After the capital value has increased, his refusal to sell the land involves an opportunity cost —the forgone utility of selling the land for its capital value. Therefore, his true gain was reaped earlier, when the capital value of his land increased, and not at the later date when he "took" his gain in the form of money.

If we set aside uncertainty and entrepreneurial profits for a moment, and assume the highly unlikely condition that all future changes can be anticipated correctly by the market,[14] then all future increases in the value of ground rents will be capitalized back into the land when it is first found and put into use. The first finder will reap the net gain immediately, and from then on all that will be earned by him and by successive heirs or purchasers is the usual interest return. When future rises are too remote to enter into the capitalized price, this is simply a phenomenon of time preference, not a sign of some mysterious breakdown in the market's process of adjustment. The fact that complete discounting never takes place is due to the presence of uncertainty, and the result is a continual accretion of entrepreneurial gains through rising capital values of land.

Thus, we see, this time from the landowner's point of view, that aggregate gains in capital value are synonymous with aggregate profits. Aggregate profits begin with the higher-order firms, then filter down until they increase real wages and the aggregate profits of landowners, particularly owners of land specific to the higher-order stages of production. (Land specific to the lower stages will, of course, bear the brunt of decreases in capital value, i.e., losses, in the progressing economy.)

As the only income to ground land that is not profit or interest, we are left with the original gains to the first finder of land. But, *here again,* there is capitalization and not a pure gain. Pioneering —finding new land, i.e., new natural resources—is a business like any other. Investing in it takes capital, labor, and entrepreneurial ability. The expected rents of finding and using are taken into account when the investments and expenses of exploration and shaping into use are made. Therefore, these gains are also capitalized backward in the original investment, and the tendency will be for them too to be the usual interest return on the investment. Deviations from this return will constitute entrepreneurial profits and losses. Therefore, we conclude that there is practically nothing unique about incomes from ground land and that all net income in the productive system goes to wages, to interest, and to profit.

A progressive economy is marked by aggregate net profits. When there is a shift from one savings-investment level to a higher one (therefore, a progressing economy), aggregate profits are earned in the economy, particularly in the higher stages of production. The increased gross investment first increases the aggregate capital value of firms that earn net profits. As production and investment increase in the higher stages, and the effects of the new saving continue, the profits disappear and become imputed to increases in real wage rates and in real ground rents. The latter effect, added to a fall in the rate of interest, leads to a rise in the real capital values of ground land.

What happens when there is a shift in the reverse direction—a changed proportion such that gross saving and investment *decline* and consumption *increases?* For the most part, we may simply trace the above analysis in reverse—that is, consider the shift from a 338:80 situation to a 318:100 situation. During the transition to a new equilibrium, there would be a *net dissaving* of 20 ounces, since gross saving decreases from 100 to 80. There would also be a *net disinvestment* of the same amount. The cause of such a shift would be an increase in the time-preference schedules of the individuals on the market. This would increase the rate of interest and widen the interest spread between cumulative prices in the production stages. It would broaden the consumption base, but leave less money available for saving and investment. We may simply reverse the diagrams above and consider the reverse shift, e.g., to a shorter and wider structure of production, to a steeper price curve with a smaller number of productive stages. The interest spread goes up, but the investment base declines. There would be higher prices for consumers' goods and therefore a greater demand for factors in this and other lower stages; on the other hand, there would be general abandonment of the higher stages in the face of the monetary attractions of the later stages, the decline in investment funds, and the shift of these funds from the higher to the lower stages. Specific factors will bear the brunt of lowered incomes and sheer abandonment in the higher stages, and they will gain in the lower stages.

There will be a rise in net income and consumption, in monetary terms, and therefore a rise in aggregate factor income. The interest rate increases, while the gross investment base declines.

In real terms the important result is a lowering in the physical productivity of labor (and of land) because of the abandonment of the most productive processes of production—the lengthiest ones. The lower output at every stage, the lower supply of capital goods, and the consequent lower output of consumers' goods leads to a lowering in the "standard of living." Money wage rates and money rents may rise (although this possibly might not occur because of the higher interest rate), but the prices of consumers' goods will rise further because of the reduced physical supply of goods.[15]

The case of decreasing gross capital investment is defined as a *retrogressing economy*.[16] The decreased investment is first revealed as aggregate losses in the economy, particularly losses to firms in the highest stages of production, the firms which are now losing customers. As time proceeds, these losses will tend to disappear, as firms leave the industry and abandon the now unprofitable production processes. The losses will thereby be imputed to factors in the form of lower real wage rates and lower real rents, which, combined with a higher interest rate, cause lower real capital values of ground land. Particularly hard hit will be the factors specific to these lines of production.

The reason why there are aggregate profits in the progressing economy and aggregate losses in the retrogressing economy, may be demonstrated in the following way. For profits to appear, there must be undercapitalization, or overdiscounting, of productive factors on the market. For losses to appear, there must be overcapitalization, or underdiscounting, of factors on the market. But if the economy is stationary, i.e., if from one period to another the total gross investment remains constant, the total value of capital remains constant. There might be an increase of investment in one line of production, but this is made possible only by a decrease elsewhere. Aggregate capital values remain constant, and therefore any profits (the result of mistaken undercapitalization) must be offset by equal losses (the result of mistaken overcapitalization). In the progressing economy, on the other hand, there are additional investment funds made available through new savings, and this provides a source for new revenue not yet capitalized anywhere in the system. These constitute the aggregate net profits during this period of change. In the retrogressing economy, investment funds are lowered, and this leaves net areas of overcapitalization of factors in the economy. Their owners suffer aggregate net losses during this period of change.[17]

Thus, another conclusion of our analysis is that aggregate profits will equal aggregate losses in a *stationary economy,* i.e., profits and losses will equal zero. This stationary economy is not the same construct as the evenly rotating economy that has played such a large role in our analysis. In the stationary economy, uncertainty does not disappear and no unending constant round pervades all elements in the system. There is, in fact, only *one* constancy: total capital invested. Clearly, the stationary economy (like all other economies) tends to evolve into the ERE, given constant data. After a time, market forces will tend to eliminate all *individual* profits and losses as well as aggregate profits and losses.

We might pause here to consider briefly the old problem: Are "capital gains"—increases in capital value—*income?* If we fully realize that profits and capital gains, and losses and capital losses, are identical, the solution becomes clear. No one would exclude business profits from money income. The same should be true of capital gains. In the ERE, of course, there are neither capital gains nor capital losses.

Let us now return to the case of the retrogressing economy and a decrease in capital investment. The greater the shift from saving to consumption, the more drastic will the effects tend to be, and the greater the lowering of productivity and living standards. The fact that such shifts can and do happen serves to refute easily the fashionable assumption that our capital structure is, by some magical provision or hidden hand, permanently and eternally self-reproducing once it is built. No positive acts of saving by capitalists are deemed necessary to maintain it.[18, 19] The ruins of Rome are mute illustrations of the error of this assumption.[20]

Refusal to maintain the value of capital, i.e., the process of net dissaving, is known as *consuming capital.* Granting the impossibility of measuring the value of capital in society with any precision, this is still a highly important concept. "Consuming capital" means, of course, not "eating machines," as some critics have scoffingly referred to it, but failing to maintain existing gross investment and the existing capital goods structure, using some of these funds instead for consumption expenditure.[21]

Professor Frank H. Knight has been the leader of the school of thought that assumes capital to be automatically permanent. Knight has contributed a great deal to economics in his analysis of profit theory and entrepreneurship, but his theories of capital and interest have misled a generation of American economists. Knight succinctly summed up his doctrine in an attack on the "Austrian" investment theory of Böhm-Bawerk and Hayek. Knight said that the latter involved two fallacies. One is that Böhm-Bawerk viewed production as the production of concrete goods, whereas "in reality, what is produced, and consumed, is services." There is no real problem here, however. It is not to be denied—in fact it has been stressed herein—that goods are valued *for their services*. Yet it is also undeniable that the concrete capital goods structure must be produced before its services can be obtained. The second alleged correction, and here we come directly to the problem of capital consumption, is that "the production of any service includes the maintenance of things used in the process, and this includes reproduction of any which are used up . . . really a detail of maintenance."[22] This is obviously incorrect. Services are yielded by things, at least in the cases relevant to our discussion, and they are produced through the using up of *things*, of capital goods. And this production does not necessarily "include" maintenance and reproduction. This alleged "detail" is a completely separate area of choice and involves the building up of more capital at a later date to replace the used-up capital.

The case of the retrogressing economy is our first example of what we may call a *crisis situation*. A crisis situation is one in which firms, in the aggregate, are suffering losses. The crisis aspect of the case is aggravated by a decline in production through the abandonment of the highest production stages. The troubles arose from "undersaving" and "underinvestment," i.e., a shift in people's values so that they do not *now* choose to save and invest enough to enable *continuation* of production processes begun in the past. We cannot simply be critical of this shift, however, since the people, given existing conditions, have decided voluntarily that their time preferences are higher, and that they wish to consume more proportionately at present, even at the cost of lowering future productivity.

Once an increase to a greater level of gross investment occurs, therefore, it is not maintained automatically. Producers have to maintain the gross investment, and this will be done only if their time preferences remain at the lower rates and they continue to be willing to save a greater proportion of gross monetary income. We have demonstrated, further, that this maintenance and further progress can take place without any increase in the money supply or other change in the money relation. Progress can occur, in fact, with falling prices of all products and factors.[23]

4. *Capital Accumulation and the Length of the Structure of Production*

We have been demonstrating that investment lengthens the structure of production. Now we may consider some criticisms of this approach.

Böhm-Bawerk is the great founder of production-structure analysis, but unfortunately he left room for misinterpretation by identifying capital accumulation with adopting "more roundabout" methods of production. Thus, consider his famous example of the Crusoe who must first construct (and then maintain) a net if he wishes to catch more than the number of fish he can catch without any capital. Böhm-Bawerk stated: "The roundabout ways of capital are fruitful but long; they procure us more or better consumption goods, but only at a later period of time." [24] Calling these methods "roundabout" is definitely paradoxical; for do we not know that men strive always to achieve their ends in the most direct and shortest manner possible? As Mises demonstrates, rather than speak of the higher productivity of roundabout methods of production, "it is more appropriate to speak of the higher physical productivity of production processes requiring more time" (longer processes).[25]

Now let us suppose that we are confronted with an array of possible production processes, based on their physical productivities. We may also rank the processes in accordance with their *length,* i.e., in terms of the waiting time between the input of the resources and the yielding of the final product. The longer the waiting period between first input and final output, the greater the disutility, *ceteris paribus,* since more time must elapse before the satisfaction is attained.

The first processes to be used will be those most productive (in value and physically) *and* the shortest. No one has maintained that *all* long processes are more productive than *all* short processes.[26] The point is, however, that all short *and* ultraproductive processes will be the first ones to be invested in and established. Given any present structure of production, a new investment will not be in a *shorter* process because the shorter, more productive process would have been chosen first.

As we have seen, there is only one way by which man can rise from the ultraprimitive level: through investment in capital. But this cannot be accomplished through short processes, since the short processes for producing the most valuable goods will be the ones first adopted. Any increase in capital goods can serve only to lengthen the structure, i.e., to enable the adoption of longer and longer productive processes. Men will invest in longer processes more productive than the ones previously adopted. They will be more productive in two ways: (1) by producing *more* of a previously produced good, and/or (2) by producing a new good that could not have been produced at all by the shorter processes. Within this framework these longer processes *are the most direct* that must be used to attain the goal—not more roundabout. Thus, if Crusoe can catch ten fish per day directly without capital and can catch a hundred fish per day with a net, building a net should not be considered as a "more roundabout method of catching fish," but as the "most direct method for catching a hundred fish a day." Furthermore, no amount of labor and land without capital could enable a man to produce an automobile; for this a certain amount of capital is required. The production of the requisite amount of capital is the shortest and most direct method of obtaining an automobile.

Any new investment will therefore be in a longer and more productive method of production. Yet, if there were no time preference, the most productive methods would be invested in *first,* regardless of time, and an increase in capital would not cause more productive methods to be used. The existence of time preference acts as a brake on the use of the more productive but longer processes. Any state of equilibrium will be based on the time-preference, or pure interest, rate, and this rate will determine the amount of savings and capital invested. It determines capital by imposing a limit on the length of the production processes and therefore on the maximum amount produced. A lowering of time preference, therefore, and a consequent lowering of the pure rate of interest signify that people are now more willing to wait for any given amount of future output, i.e., to invest more proportionately and in longer processes than heretofore. A rise in time preference and in the pure interest rate means that people are less willing to wait and will spend proportionately more on consumers' goods and less on the longer production processes, so that investments in the longest processes will have to be abandoned.[27]

One qualification to the law that increased investment lengthens production processes appears when investment turns to a type of good which is less useful than the goods previously acquired, yet which has a shorter process of production than some of the others. Here the investment in this process was checked, not by the length of the process, but by its inferior (value) productivity. Yet even here the structure of production was lengthened, since people have to wait longer for the new *and* the old goods than they previously did for the old good. New capital investment always lengthens the overall structure of production.

What of the case where a technological invention permits a more productive process with a lesser amount of capital investment? Is this not a case in which increased investment *shortens* the production structure? Up to this point we have been assuming technological knowledge as given. Yet it is not given in the dynamic world. Technological advance is one of the most dramatic features of the world of change. What then of these "capital-saving" inventions? One interesting example was cited by Horace White in a criticism of Böhm-Bawerk.[28] Oil was produced first by ships hunting in the Arctic for whales, the whale oil being processed from the whales, etc., an obviously lengthy production process. Later an invention permitted people to bore for oil in the ground, thereby immeasurably shortening the production period.

Aside from the fact that, empirically, most inventions do not shorten physical production processes, we must reply that the limits at any time on investment and productivity are a *scarcity of saved capital, not* the state of technological knowledge. In other words, there is always an unused shelf of technological projects available and idle. This is demonstrable by the fact that a new invention is not immediately and instantaneously adopted by all firms in the society. Therefore, any further investment will lengthen production processes, many of them more productive because of superior technique. A new invention does not automatically impel itself into production, but first joins the unused array. Further, in order for the new invention to be used, *more capital must be invested. The ships for whaling have already been built; the oil wells and machinery, etc., must be created anew.* Even the newly invented method will yield a greater product only through further investment in longer processes. In other words, the only way to obtain more oil now is to invest more capital in more machinery and lengthier production periods in the oil-drilling business. As Böhm-Bawerk pointed out, White's criticism would apply only if the invention were *progressively* capital-saving, so that the product would always increase with the shortening of the process. But in that case, boring for oil with one's bare hands, unaided by capital, would have to be more productive than drilling for oil with machinery.[29]

Böhm-Bawerk drew the analogy of an agricultural invention applied to two grades of land, one grade previously yielding a marginal product of 100 bushels of wheat, the lower grade yielding 80 bushels Now suppose use of the invention raises the marginal product of the lower-grade land to 110 bushels. Does this mean that the poorer land *now* yields more than the fertile land and that the effect of agricultural inventions is to make poorer lands more productive than fertile ones? Yet this is precisely analogous to White's position, which maintains that inventions may cause shorter production processes to be more productive! As Böhm-Bawerk pointed out, it is obvious that the source of the error is this: inventions increase the physical productivity of *both* grades of land. The better land becomes *still* better. Similarly, perhaps it is true that an invention will cause a shorter process to be more productive now than a longer process was previously. But this does not mean that it is superior to *all* longer processes; longer processes using the invention will still be more productive than the shorter ones. (Boring for oil *with* machinery is more productive than boring for oil without machinery.)

Technological inventions have received a far more important place than they deserve in economic theory. It has often been assumed that production is limited by the "state of the arts"—by technological knowledge—and therefore that any improvement in technology will immediately show itself in production. Technology does, of course, set a limit on production; no production process could be used at all without the technological knowledge of how to put it into operation. But while knowledge is a limit, *capital* is a narrower limit. It is logically obvious that while capital cannot engage in production beyond the limits of existing available knowledge, knowledge can and does exist without the capital necessary to put it to use. Technology and its improvement, therefore, play no *direct* role in the investment and production process; technology, while important, must always *work through* an investment of capital. As was stated above, even the most dramatic capital-saving invention, such as oil-drilling, can be put to use only by saving and investing capital.

The relative unimportance of technology in production as compared to the supply of saved capital becomes evident, as Mises points out, simply by looking at the "backward" or "underdeveloped" countries.[30] What is lacking in these countries is not knowledge of Western technological methods ("know-how"); that is learned easily enough. The service of imparting knowledge, in person or in book form, can be paid for readily. What is lacking is the supply of saved capital needed to put the advanced methods into effect. The African peasant will gain little from looking at pictures of American tractors; what he lacks is the saved capital needed to purchase them. That is the important limit on his investment and on his production.[31]

A businessman's new investment in a longer and more physically productive process will therefore be made from a sheaf of processes previously known but unusable because of the time-preference limitation. A lowering of time preferences and of the pure interest rate will signify an expansion of saved capital at the disposal of investors and therefore an expansion of the longer processes, the time limitation on investment having been weakened.

Some critics charge that not all net investment goes to lengthening the structure—that new investments might duplicate preexisting processes. This criticism misfires, however, because our theory does not assume that net saving must be invested in an actually longer process in some specific line of production. A longer production structure can just as well be achieved by a shift from consumption to investment that will lengthen the *aggregate* production structure by greater investment in already existing longer processes, accompanied by less investment in existing shorter processes. Thus, in the case of Crusoe mentioned above, suppose that Crusoe now invests in a *second* net, which will permit him to catch a total of a hundred fifty fish a day. The structure of production is now lengthened even though the second net may be no more productive than the first. For the total period of production, from the time he must build and rebuild his total capital until his product arrives, is now considerably longer. He must now cut down again on present consumption (including leisure) and work on his second net.[32]

5. *The Adoption of a New Technique*

At any given time, then, there will be a shelf of available and more productive techniques that remain unused by many firms continuing with older methods. What determines the extent to which these firms adopt new and more productive techniques?

The reason that firms do not scrap their old methods immediately and begin afresh is that they and their ancestors have invested in a certain structure of capital goods. As times and tastes, resources, and techniques change, much of this capital investment becomes an *ex post* entrepreneurial error. If, in other words, investors had been able to foresee the changed pattern of values and methods, they would have invested in a far different manner. Now, however, the investment has been made, and the resulting capital structure is a given residue from the past that supplies the resources they have to work with. Since costs in the *present* are only present and future opportunities forgone, and bygones are bygones, existing equipment must be used in the most profitable way. Thus, there undoubtedly would have been far less investment in railroads in late nineteenth-century America if investors had foreseen the rise of truck and plane competition.[33] Now that the existing railroad equipment remains, however, decisions concerning how much of it is to be used must be based on current and expected future costs, not on past expenses or losses.

An old machine will be scrapped for a new and better substitute if the superiority of the new machine or method is great enough to compensate for the additional expenditure necessary to purchase the machine. The same applies to the shifting of a plant from an old location to a superior new location (superior because of greater access to factors or consumers). At any rate, the adoption of new techniques or locations is limited by the usefulness of the already given (and specific) capital-goods structure. This means that those processes and methods will be adopted at any time which will best satisfy the desires of the consumers.

The fact that investment in a new technique or location is unprofitable means that the use of capital in the new process at the cost of scrapping the old equipment is a waste from the point of view of satisfying consumer wants. How fast equipment or location is scrapped as obsolescent, then, is not decided arbitrarily by businessmen; it is determined by the values and desires of consumers, who decide on the price and profitability of the various goods and on the values of the necessary nonspecific factors used to produce these goods.[34]

As is often true, critics of the free market have attacked it from two contradictory points of view: one, that it unduly slows down the rate of technological improvement from what it could and should be; and, two, that it unduly accelerates the rate of technological improvement, thereby unsettling the peaceful course of society. We have seen that a free market will, as far as the knowledge and foresight of entrepreneurs permit, produce so that factors are best allocated to satisfy the wishes of consumers. Improvement in productivity through new techniques and locations will be balanced against the opportunity costs forgone in value product from using the existing old plant.[35] And ability in entrepreneurial foresight will be assured as much as possible by the market's process of "selection" in "rewarding" good forecasters and "penalizing" poor ones proportionately.

THE ENTREPRENEUR AND INNOVATION

Under the stimulus of the late Professor Schumpeter, it has been thought that the essence of entrepreneurship is *innovation* —the disturbance of peaceful, unchanging business routine by bold innovators who institute new methods and develop new products. There is, of course, no denying the importance of the discovery and institution of more productive methods of obtaining a product or of the development of valuable new products. Analytically, however, there is danger of overrating the importance of this process. For innovation is only one of the activities performed by the entrepreneur. As we have seen above, most entrepreneurs are not innovators, but are in the process of investing capital within a large framework of available technological opportunities. Supply of product is limited by supply of capital goods rather than by available technological know-how.

Entrepreneurial activities are derived from the presence of *uncertainty*. The entrepreneur is an adjuster of the discrepancies of the market toward greater satisfaction of the desires of the consumers. When he innovates he is *also* an adjuster, since he is adjusting the discrepancies of the market as they present themselves in the potential of a new method or product. In other words, if the ruling rate of (natural) interest return is 5%, and a business man estimates that he could earn 10% by instituting a new process or product, then he has, as in other cases, discovered a discrepancy in the market and sets about correcting it. By launching and producing more of the new process, he is pursuing the entrepreneurial function of adjustment to consumer desires, i.e., what he estimates consumer desires will be. If he succeeds in his estimate and reaps a profit, then he and others will continue in this line of activity until the income discrepancy is eliminated and there is no "pure" profit or loss in this area.

6. *The Beneficiaries of Saving-Investment*

We have seen that an increase in saving and investment causes an increase in the real incomes of owners of labor and land factors. The latter is reflected in increases in the capital value of ground lands. The benefits to land factors, however, accrue only to particular lands. Other lands may lose in value, although there is an aggregate gain. This is so because usually lands are relatively specific factors. For the nonspecific factor *par excellence,* namely, labor, there is, on the contrary, a very general rise in real wages. These laborers are "external beneficiaries" of increased investment, i.e., they are beneficiaries of the actions of others without paying for these benefits. What benefits do the investors themselves acquire? In the long run, they are not great. In fact, their rate of interest return is reduced. This is not a loss, however, since it is the outcome of their changed time preferences. Their *real* interest return may well be increased, in fact, since the fall in the interest rate may be offset by the rise in the purchasing power of the monetary unit in an expanding economy.

The main benefits gained by the investors, therefore, are short-run entrepreneurial profits. These are earned by investors who see a profit to be gained by investing in a certain area. After a while, the profits tend to disappear as more investors enter this field, although changing data are always presenting new profit opportunities to enterprising investors. But the short-run benefits earned by the workers and landowners are more certain. The entrepreneur-capitalists take the risks of speculating on the uncertain market; their investment may result in profits, in breaking even with no profits at all, or in suffering outright losses. No one can guarantee profits to them.[36] Aggregate new investment will result in aggregate net profits, to be sure, but no one can predict with certainty in what areas the profits will appear. On the other hand, the workers and landowners in the fields of new investment gain *immediately,* as new investment bids up wages and rents in the longer processes. They gain even if the investment turns out to have been uneconomic and unprofitable. For in that case, the error in satisfying consumers is borne by the heavy losses of the capitalist-entrepreneurs. In the meanwhile, the workers and landowners have reaped a gain. This is hardly a clear gain, however, since consumers have, as a whole, suffered in real income through entrepreneurial error in producing the wrong kind of goods. Yet it is obvious that the brunt of the loss from making the error is suffered by the entrepreneurs.

7. *The Progressing Economy and the Pure Rate of Interest*

It is clear that a feature of the progressing economy must necessarily be a fall in the pure rate of interest. We have seen that in order for more capital to be invested, there must be a fall in the pure rate of interest, reflecting general declines in time preferences. If the pure rate remains the same, this is an indication that there will be no new investment or disinvestment, that time preferences are generally stable, and that the economy is *stationary*. A fall in the pure rate of interest is a corollary of a drop in time preferences and a rise in gross investment. A rise in the pure rate of interest is a corollary of a rise in time preferences and net disinvestment. Hence, for the economy to keep advancing, time preferences and the pure rate of interest must continue to fall. If the pure rate of interest remains the same, capital will only just be maintained at its same real level.

Since praxeology never establishes quantitative laws, there is no way by which we can determine any sort of *quantitative* relation between changes in the pure rate of interest and the amount that capital will change. All we can assert is the qualitative relation.

It should be noticed what we are *not* saying. We are *not* asserting that the pure rate of interest is determined by the quantity or value of capital goods available. We are not concluding, therefore, that an increase in the quantity or value of capital goods lowers the pure rate of interest because interest is the "price of capital" (or for any other reason). On the contrary, we are asserting *precisely the reverse:* namely, *that a lower pure rate of interest increases the quantity and value of capital goods available.* The causative principle is just the other way round from what is commonly believed. The pure rate of interest, then, can change at any time and is determined by time preferences. If it is lowered, the stock of invested capital will increase; if it is raised, the stock of invested capital will fall.

That a change in the pure rate of interest has an *inverse* effect on the stock of capital is discovered by deduction from accepted axioms and not inferred from uncertain and complex empirical data.[37] The law is not deduced, for example, by observing that the *market* rate of interest in backward nations is higher than in advanced nations. It is clear that this phenomenon is at least partly due to the higher entrepreneurial risk component in the backward countries and is not *necessarily* caused by differences in the *pure* rate of interest.

8. *The Entrepreneurial Component in the Market Interest Rate*

In the ERE, as we have seen, the interest rate throughout the economy will be uniform. In the real world there is an additional *entrepreneurial* (*or "risk"*) *component,* which *adds* to the interest rate in particularly risky ventures, and in accordance with the degree of risk. (Since "risk" has an actuarially "certain" connotation, we may better call it "degree of uncertainty.") Thus, suppose that the basic social time preference rate, or *pure* rate of interest, in the economy is 5%. Capitalists will buy 100 ounces of future goods to sell less remotely future goods one year later at 105 ounces. Thus, a 5% return is a "pure" return, i.e., it is the return assuming that the 105 ounces will *definitely* be accruing. The pure rate, in other words, abstracts from any entrepreneurial uncertainty. It gauges the premium of present over future goods on the assumption that the future goods are known as *certain* to be forthcoming.

In the real world, of course, nothing is absolutely certain, and therefore the pure rate of interest (the result of time preference) can never appear alone. Now suppose that in one particular venture or industry it is fairly certain that 105 ounces will be earned from the sale of a product one year in the future. Then, with a social time preference rate of 5%, the capitalist-entrepreneurs will be willing to pay 100 ounces for factors and reap a 5% return. But suppose that there is another possible venture considered very risky by entrepreneurs. The product is expected to sell for 105 ounces, but there are definite possibilities that the price of the product might plummet. In that case, the entrepreneurs will not be willing to pay 100 ounces for factors. They would have to be compensated for the extra risks that they run; the price of the factors might finally be 90 ounces. Thus, the riskier a given venture appears *ex ante,* the higher will be the expected interest return that capitalists will require before they make the investment.

On the market, then, a whole structure of interest rates will be superimposed on the pure rate, varying positively in accordance with the expected risks of each venture. The counterpart of this structure will be a similar variety of interest rates on the loan market, which, as usual, is derivative from the goods market.[38] In the *long run,* of course, the tendency, given no changes of data, will be for people to realize that such and such a venture is pretty consistently yielding a higher than 5% return. The risk component for this venture will then fall, other entrepreneurs will enter this type of venture, and the interest rate will tend to fall back to 5% again. Thus, the varying risk structure of interest does not invalidate the tendency toward uniformity of the interest rate. On the contrary, any variety is something of an index of the various "risks" of uncertainty which still remain in the market and which would be eliminated if data were frozen and an ERE were reached. If data *did* remain constant, then the uniformity of the ERE would ensue. It is because data are always changing and thus setting up new uncertainties in place of the old that we do not have the uniformity of the ERE.

9. *Risk, Uncertainty and Insurance*

Entrepreneurship deals with the inevitable uncertainty of the future. Some forms of uncertainty, however, can be converted into *actuarial risk.* The distinction between "risk" and "uncertainty" has been developed by Professor Knight.[39] "Risk" occurs when an event is a member of a class of a large number of homogeneous events and there is fairly certain knowledge of the frequency of occurrence of this class of events. Thus, a firm may produce bolts and know from long experience that a certain almost fixed proportion of these bolts will be defective, say one per cent. It will not know whether any given bolt will be defective, but it will know the proportion of the total number defective. This knowledge can convert the percentage of defects into a definite cost of the firm's operations, especially where enough cases occur *within* a firm. In other situations, a given loss or hazard may be large and infrequent in relation to a firm's operations (such as the risk of fire), but over a large number of firms it could be considered as a "measurable" or actuarial risk. In such situations, the firms themselves could pool their risks, or a specialized firm, an "insurance company," could organize the pooling for them.

The principle of insurance is that firms or individuals are subject to risks which, in the aggregate, form a class of homogeneous cases. Thus, out of a class of a thousand firms, no one firm has any idea whether it will suffer a fire next year or not; but it is fairly well known that ten of them will. In that case, it may be advantageous for each of the firms to "take out insurance," to pool their risks of loss. Each firm will pay a certain premium, which will go into a pool to compensate those firms which suffer the fires.

As a result of competition, the firm organizing the insurance service will tend to obtain the usual interest income on its investment, no more and no less.

The contrast between risk and uncertainty has been brilliantly analyzed by Ludwig von Mises. Mises has shown that they can be subsumed under the more general categories of "class probability" and "case probability." [40] "Class probability" is the only scientific use of the term "probability," and is the only form of probability subject to numerical expression.[41] In the tangled literature on probability, no one has defined class probability as cogently as Ludwig von Mises:

> Class probability means: We know or assume to know, with regard to the problem concerned, everything about the behavior of a whole class of events or phenomena; but about the actual singular events or phenomena we know nothing but that they are elements of this class.[42]

Insurable risk is an example of class probability. The businessmen knew how many bolts would be defective out of a total number of bolts, but had no knowledge as to which particular bolt would be defective. In life insurance the mortality tables reveal the proportion of mortality of each age group in the population, but they tell nothing about the particular life expectancy of any given individual.

Insurance firms have their problems. As soon as something specific is known about individual cases, firms break down the cases into subaggregates in an effort to maintain homogeneity of classes, i.e., the similarity, as far as is known, of all individual members in the class with respect to the attribute in question. Thus, certain subgroups within one age group may have a higher mortality rate because of their occupation; these will be segregated, and different premiums applied to the two cases. If there were knowledge about differences between subgroups, and insurance firms charged the same premium rate to all, then this would mean that the healthy or "less risky" groups would be subsidizing the riskier. Unless they specifically desire to grant such subsidies, this result will never be maintained in the competitive free market. In the free market each homogeneous group will tend to pay premium rates in proportion to its actuarial risk, plus a sum for interest income and for necessary costs for the insurance firms.

Most uncertainties are uninsurable because they are unique, single cases, and not members of a class. They are unique cases facing each individual or business; they may bear resemblances to other cases, but are not homogeneous with them. Individuals or entrepreneurs know something about the outcome of the particular case, but not everything. As Mises defines it:

> Case probability means: We know, with regard to a particular event, some of the factors which determine its outcome; but there are other determining factors about which we know nothing.[43]

Estimates of future costs, demands, etc., on the part of entrepreneurs are all unique cases of uncertainty, where methods of specific understanding and individual judgment of the situation must apply, rather than objectively measurable or insurable "risk."

It is not accurate to apply terms like "gambling" or "betting" to situations either of risk or of uncertainty. These terms have unfavorable emotional implications, and for this reason: they refer to situations where *new* risks or uncertainties are *created* for the enjoyment of the uncertainties themselves. Gambling on the throw of the dice and betting on horse races are examples of the deliberate creation by the bettor or gambler of new uncertainties which otherwise would not have existed.[44] The entrepreneur, on the other hand, is not creating uncertainties for the fun of it. On the contrary, he tries to reduce them as much as possible. The uncertainties he confronts are already inherent in the market situation, indeed in the nature of human action; someone must deal with them, and he is the most skilled or willing candidate. In the same way, an *operator* of a gambling establishment or of a race track is not creating new risks; he is an entrepreneur trying to judge the situation on the market, and neither a gambler nor a bettor.

Profit and loss are the results of entrepreneurial *uncertainty.* Actuarial *risk* is converted into a cost of business operation and is not responsible for profits or losses except in so far as the actuarial estimates are erroneous.

9

Production: Particular Factor Prices and Productive Incomes

1. *Introduction*

Up to this point we have analyzed the determination of the rate of interest and of the prices of productive factors on the market. We have also discussed the role of entrepreneurship in the changing world and the consequences of changes in saving and investment. We now return to analysis of the particular ultimate factors—labor and land—and to a more detailed discussion of entrepreneurial incomes. Our analysis of general factor pricing in chapter 7 treated prices as they would be in the ERE, a state toward which they are always tending. Our discussion of entrepreneurship in chapter 8 showed that this tendency is a result of drives toward profits and away from losses by capitalist-entrepreneurs. Now let us return to the particular factors and analyze their pricing, their supplies and incomes, and the effects of a changing economy upon them.

2. *Land, Labor, and Rent*

A. RENT

We have been using the term *rent* in our analysis to signify the hire price of the services of goods. This price is paid for *unit services,* as distinguished from the prices of the *whole factors* yielding the service. Since all goods have unit services, *all* goods will earn rents, whether they be consumers' goods or any type of producers' goods. Future rents of durable goods tend to be capitalized and embodied in their capital value and therefore in the money presently needed to acquire them. As a result, the investors and producers of these goods tend to earn simply an interest return on their investment.

All goods earn *gross rent,* since all have unit services and prices for them. If a good is "rented out," it will earn gross rent in the hire charge. If it is bought, then its present price embodies discounted future rents, and in the future it will earn these rents by contributing to production. All goods, therefore, earn gross rents, and here there is no analytic distinction between one factor and another.

Net rents, however, are earned only by labor and land factors, and not by capital goods.[1] For the gross rents earned by a capital good will be imputed to gross rents paid to the owners of the factors that produced it. Hence, on net, only labor and land factors—the ultimate factors—earn rents, and, in the ERE, these, along with interest on time, will be the only incomes in the economy.

The Marshallian theory holds that durable capital goods earn "quasirents" temporarily, while permanent lands earn full rents. The fallacy of this theory is clear. Whatever their durability, capital goods receive gross rents just as lands do, whether in the changing real world or the ERE. In the ERE, they receive no *net* rents at all, since these are imputed to land and labor. In the real world, their capital value changes, but this does not mean that they earn net rents. Rather, these changes are *profits* or *losses* accruing to their owners as entrepreneurs. If, then, incomes in the real world are net rents (accruing to labor and land factors) and entrepreneurial profits, while the latter disappear in the ERE, there is no room in *either* world for the concept of "quasirent." Nowhere does this special type of income exist.

A *wage* is the term describing the payment for the unit services of a *labor* factor. *A wage, therefore, is a special case of rent;* it is labor's "hire." On a free market this rent cannot, of course, be capitalized, since the whole labor factor—the man—cannot be bought and sold for a price, his income to accrue to his owner. This is precisely what occurs, however, under a regime of slavery. The wage, in fact, is the only source of rent that *cannot* be capitalized on the free market, since every man is necessarily a self-owner with an inalienable will.

One distinction between wages and land rents, then, is that the latter are capitalized and transformed into interest return, while the former are not. Another distinction is purely *empirical* and not apodictically true for mankind. It has simply been an historical-empirical truth *that labor factors have always been relatively scarcer than land factors.* Land and labor factors can be ranged in order of their marginal value productivity. The result of a relative superfluity of land factors is that not all the land factors will be put to use, i.e., the poorest land factors will be left idle, so that labor will be free to work the most productive land (e.g., the most productive agricultural land, urban sites, fish hatcheries, "natural resources," etc.). Laborers will tend to use the most value-productive land first, the next most productive second, etc. At any given time, then, there will be some land —the most value-productive—under cultivation and use, and some not in use. The latter, in the ERE, will be free land, since its rental earnings are zero, and therefore its price will be zero.[2] The former land will be "supramarginal" and the latter land will be "submarginal." On the dividing line will be the poorest land now in use; this will be the "marginal" land, and it will be earning *close* to zero rent.

It is important to recognize the qualification that the marginal land will earn *not zero,* but only *close* to zero, rent.[3] The reason is that, in human action, there is no infinite continuity, and action cannot proceed in infinitely small steps. Mathematically-minded writers tend to think in such terms, so that the points before and after the point under consideration all tend to merge into one. Using marginal land, however, will pay only if it earns *some* rent, even though a small one. And, in cases where there are large discontinuities in the array of MVP's for different lands, the marginal land might be earning a substantial sum. It is obvious that there is no praxeological precision in terms like "close," "substantial," etc. All that we can say with certainty is that if we arrange the MVP's of lands in an array, the rents of the *sub*-marginal lands will be zero. We cannot say what the rent of the marginal land will be, except that it will be closer to zero than that of the supramarginal lands.[4]

Now we have seen above that the marginal value product of a factor decreases as its total supply increases, and increases as the supply declines. The three major categories of factors in the economy are land, labor, and capital goods. In the progressing economy, the supply of capital per person increases.[5] The supply of all ranks of capital goods increases, thereby decreasing the marginal value productivities of capital goods, so that the prices of capital goods fall. The *relative* MVP's of land and labor factors, in the aggregate, tend to rise, so that their income will rise in real terms, if not in monetary ones.

What if the supply of capital remained the same, while the supply of labor or land factors changed? Thus, suppose that, with the same capital structure, population increases, thus expanding the total supply of labor factors. The result will be a *general fall in the MVP of labor* and a *rise in the MVP of land factors.* This rise will cause formerly submarginal, no-rent lands to earn rent and to enter into cultivation by the new labor supply. This is the process particularly emphasized by Ricardo: population pressing on the land supply. The tendency for the MVP of labor to drop, however, may well be offset by a rise in the MPP schedules of labor, since a rise in population will permit a greater utilization of the advantages of specialization and the division of labor. The constant supply of capital would have to be reoriented to the changed conditions, but the constant amount of money capital will then be more physically productive. Hence, there will be an offsetting tendency for the MVP's of labor to rise. At any time, for any given conditions of capital and production processes, there will be an "optimum" population level that will maximize the total output of consumers' goods per head in the economy. A lower level will not take advantage of enough division of labor and opportunities for labor, so that the MPP of labor factors will be lower than at the optimum point; a higher level of population will decrease the MVP of labor and will therefore lower real wages per person.[6]

Recognition of the existence of a theoretical "optimum" population that maximizes real output per head, given existing land and capital, would go far to end the dreary Malthusian controversies in economic theory. For whether a given increase in population at any time will lead to an increase or decrease in real output per head is an *empirical* question, depending on the concrete data. It cannot be answered by economic theory.[7]

It might be wondered how the statement that increasing population might increase MPP and MVP's can be reconciled with the demonstration above that factors will always be put to work in areas of *diminishing* physical returns. The conditions here are completely different, however. In the previous problem we were assuming a given total supply of the various factors and considering the best method of their relative arrangement. Here we are dealing, not with particular production processes and given supplies of factors, but with the vague concept of "production" in general and with the effect of change in the total supply of a factor. Furthermore, we are dealing not with a true factor (homogeneous in its supply), but with a "class of factors," such as land-in-general or labor-in-general. Aside from the problem of vagueness, it is evident that the conditions of our present problem are completely different. For if the *total* supply of a factor changes and it has an effect on the productivity of the labor factor, this is equivalent to a *shift* in the MPP curves (or schedules) rather than a movement *along the curves* such as we considered above.[8]

Because we are accustomed to viewing labor implicitly as scarcer than land factors, we speak in terms of *zero-rent* land. If the situations were reversed, and lands were scarcer than labor factors, we would have to speak of zero-wage laborers, submarginal labor, etc. Theoretically, this is certainly possible, and it might be argued that in such static societies with institutionally limited markets as ancient Sparta and medieval or post-Medieval Europe, this condition actually obtained, so that the "surplus labor" earned a below-subsistence wage in production. Those who were "surplus" and did not own invested capital were curbed by infanticide or reduced to beggary.

That submarginal land earns no rent has given rise to an unfortunate tendency to regard the very concept of rent as a "differential" one—as referring particularly to *differences in quality* between factors. Sometimes the concept of "absolute" or pure rents is thrown overboard completely, and we hear only of rent in a "differential sense," as in such statements as the following:

If land A earns 100 gold ounces a month, and land B earns zero, land A is making a differential rent of 100.

If laborer A earns 50 gold ounces a month, and laborer B earns 30 gold ounces, A earns a "rent of ability" of 20 ounces.

On the contrary, rents are absolute and do not depend on the existence of a poorer factor of the same general category. The "differential" basis of rent is purely dependent on, and derived from, absolute rents. It is simply a question of arithmetical subtraction. Thus, land A may earn a rent of 100, and land B a rent of 0. Obviously, the difference between 100 and 0 is 100. In the case of the laborer, however, laborer A's "rent," i.e., wage, is 50 and B's is 30. If we want to compare the two earnings, we may say that A earns 20 more than B. There is little point, however, in adding to confusion by using "rent" in this sense.

The "differential rent" concept has also been used to contrast earnings by a factor in one use with those of the same factor in another use. Thus, if a factor, whether land or labor, earns 50 ounces per month in one use and *would* have earned 40 ounces in some other use, then its "rent" is 10 ounces. Here, "differential rent" is used to mean the difference between the actual DMVP and the opportunity forgone or the DMVP in the next best use. It is sometimes believed that the 10-ounce differential is in some way not "really" a part of costs to entrepreneurs, that it is surplus or even "unearned" rent acquired by the factor. It is generally admitted that it is not without cost to *individual firms,* which have bid the factor up to its MVP of 50. It is supposed, however, to be without cost from the "industry point of view." But there *is no* industry "point of view." Not "industries," but *firms,* buy and sell and seek profits.

In fact, the entire discussion concerning whether or not rent is "costless" or enters into cost is valueless. It belongs to the old classical controversies about whether rents are "price-determined" or "price-determining." The view that *any* costs can be price-determining is a product of the old cost-of-production theory of value and prices. We have seen that costs do not determine prices, but vice versa. Or more accurately, prices of consumers' goods, through market processes, determine the prices of productive factors (ultimately land and labor factors), and the brunt of price changes is borne by *specific* factors in the various fields.

B. THE NATURE OF LABOR

As we have mentioned earlier, "labor" is a category that includes a myriad variety of services. Generally, labor is the expenditure of pure human energy on a production process. Catallactically, labor is hired by entrepreneur-capitalists.[9] It is grossly unscientific to separate laborers into arbitrary categories and to refer to one group as "labor" and "workers," while the other group receives various other names. To give them other names implies a difference in *kind* between their contribution and the contribution of others, but this difference does not exist. Thus, the popular custom is to call some hired labor, "labor," while others are called "managers," "executives," etc. "Management" is a particularly popular category as contrasted with "labor," and we hear a great deal of the term "labor-management relations." But these categories are valueless. "Management" is hired by the owners or owner to direct production; managers are supposed to obey the orders of their superiors—something they consent to do as part of the terms of their employment. The lower-quality workers, further down the scale—the "laborers"—are treated by these writers as a different breed.[10] Their function is supposed to be not to obey orders and engage in a production process, but in some way to be different—to act as an independent entity, asserting its "rights," quarreling with "management," etc.

Yet there is no difference in kind between "workers" and "management." The vice-president of a company, if hired by its owners, has exactly the same amount of justification, or lack of justification, for joining a union as does a hired mechanic. Both are supposed to abide by the terms of their employment, i.e., to obey the relevant orders of their superiors. Both are free at any time to haggle over the terms of their employment, just as in any other voluntary exchange on the market. Both are *laborers,* who expend human energy in the production of goods. No special quality attaches to one set of laborers or another that makes it more or less justifiable for them to join a union.

The union question will be explored below, in chapter 10 on Monopoly and Competition. Here we might note that this false "labor-management" dichotomy crops up in an interesting way in the struggle over foremen's unions.[11] For some reason, even the most ardent union advocate thinks absurd the idea of unionizing the vice-presidents. Those more critical of unions think it monstrous if unions attempt to organize foremen, who are in the lower echelons of "management," and would of course be horrified at the very thought of unionizing vice-presidents. Yet if there is no real dichotomy and all employees are labor, then our views on unions must be altered accordingly. For if everyone admits that the unionizing of vice-presidents is absurd or evil, then perhaps the same adjective would have to apply to the unionization of *any* workers.

C. SUPPLY OF LAND

We have seen throughout that the processes of price determination for the unit services of land and labor are exactly the same. Both sets of factors tend to earn their DMVP; both receive advances of present money from capitalist-entrepreneurs; etc. The analysis of the pricing of unit services of original or "permanent" factors applies equally to each. There are three basic differences between the conditions of land and those of labor, however, that make separation of the two important. One we have already dealt with in detail: that (in the free economy) land can be capitalized in its price as a "whole factor" and therefore earns simply interest and entrepreneurial changes in asset value; while labor cannot be capitalized. A second difference we have been considering—the empirical fact that labor has been more scarce than land factors.

A corollary of this is that labor is pre-eminently the nonspecific factor, which is applicable to all processes of production, whereas land tends to be far more specific. A third difference derives from the fact that laborers are human beings and—also an empirical fact—that leisure is always a consumers' good. As a result, there will be reserve prices for labor against leisure, whereas land—in the broadest sense—will not have a reserve price. We shall deal with the effects of this distinction presently.

The fact that labor is scarcer and nonspecific means that there will always be *unused land*. Only the best and most productive land will be used, i.e., the land with the highest DMVP's. Similarly, in the real world of uncertainty, where errors are made, there will also be unused *capital goods,* i.e., in places where malinvestments had been made which turned out to be unprofitable.

We may now trace the supply and demand curves for land factors. We have shown above that, for any factor, the *particular* demand curve for any use, i.e., the particular MVP curve for a factor in that use, will slope downward in the region in which the factor is working. Also, we have seen that the *general* demand curve for the factor in the range of all its uses will slope downward. *What of the supply curves* for land factors? If we take the *general* supply curve (the factor considered in relation to all of its uses), then it is clear that there is no reservation demand curve for land; at least this will be true in the ERE. The *particular* supply curves for each use will depend on the alternate uses a piece of land may have. If it has any alternative uses, its supply curve for each use will slope upward as its price increases, since it can be shifted from one use to another as a use yields a higher rental return.

In its *particular* uses, the landowner will have a reservation demand, since he may obtain a higher return by shifting to another use. The greater the extent of alternate uses, the flatter each particular supply curve will tend to be.

In Fig. 62, the first diagram depicts the supply and demand curves for the general use of a land factor, including all uses. The supply curve will be the stock—a vertical straight line. The diagram to the right depicts typical demand and supply curves for a particular use; here, the supply curve slopes upward because it can shift to and from the alternative use or uses. The intersection of the supply and demand curves, in each instance, yields the rental price, equaling the discounted marginal value product for the total quantity of the factor available. The price for the general uses, *OC*, will be the same as the prices *OE*, etc., for any particular use, since the price of the factor must, in equilibrium, be the same in all uses. The *general* diagram also yields the total quantity that will be sold for rent, OS_1, which will equal the total supply of the land factor available. The *sum* of the equilibrium quantities (such as *EB* on the diagram) supplied for particular uses would equal the total supplied for all uses, OS_1.

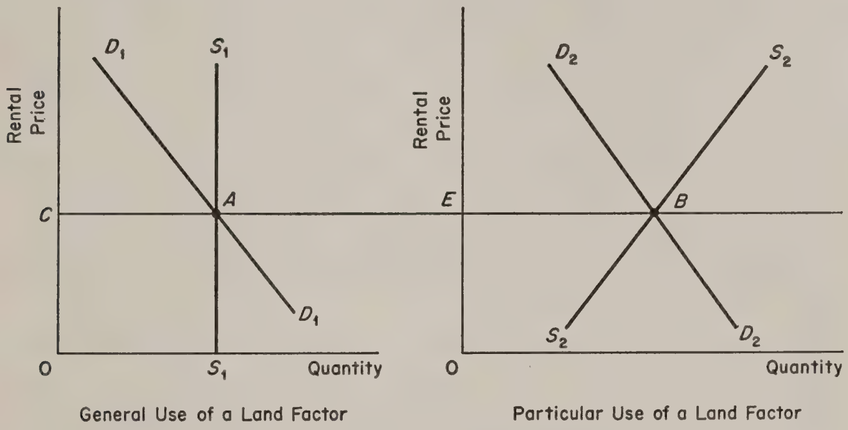


FIG. 62. SUPPLY OF AND DEMAND FOR LAND

We have seen that the prices of consumers' goods are set by consumers' demand schedules, as determined by their value scales, i.e., by the way that the quantity supplied by producers (the first-rank capitalists) will be valued by consumers. When, in the changing economy, producers have speculative reservation demands, the price will, at any moment, be set by the total demand for the given stock, and this will always tend to approach the true consumers' demand price. A similar situation obtains in land. The prices of land factors will be determined by the general schedule of the factors' DMVP's and will be set according to the point of intersection of the total quantity, or stock, of the factor available, with its discounted marginal value productivity schedule. The DMVP, in turn, is, as we have seen at length, determined by the extent to which this factor serves the consumers. The MVP is determined directly by the degree that a factor unit serves the consumers, and the discount is determined by the extent that consumers choose saving-investment as against present consumption. Therefore, the *value scales of the consumers* determine, given the stocks of original factors, all the various results of the market economy that need to be explained: the prices of the original factors, the allocation of original factors, the incomes to original factors, the rate of time preferences and interest, the length of the production processes in use, and the amounts and types of the final products. In our changing real world, this beautiful and orderly structure of the free market economy tends to be attained through the drive of the entrepreneurs toward making profit and avoiding loss.[12]

At this point, let us consider a great bugaboo of the Henry Georgists—speculation in land that withholds productive land from use. According to the Georgists, a whole host of economic evils, including the depressions of the business cycle, stem from speculative withholding of ground land from use, causing an artificial scarcity and high rents for the sites in use. We have seen above that speculation in consumers' goods (and the same will also apply to capital goods) performs the highly useful function of speeding adjustment to the best satisfaction of consumer demand. Yet, curiously, speculation in *land* is far less likely to occur and is far less important than in the case of any other economic good. For consumers' or capital goods, being nonpermanent, can be used either now or at some later date. There is a choice between use in the present *or* use at various times in the future. If the owner of the good estimates that demand for the good will be higher in the future and therefore its price will be greater, he will, provided that the length of waiting time is not too costly in terms of time preference and storage, keep the goods on hand (in inventory) until that date. This serves the consumers by shifting the good from use at present to a more highly valued use in the future.

Land, however, is a permanent resource, as we have seen. It can be used all the time, *both* in the present *and* in the future. Therefore, any withholding of land from use by the owner is simply silly; it means merely that he is refusing monetary rents unnecessarily. The fact that a landowner may anticipate that his land value will increase (because of increases in future rents) in a few years furnishes no reason whatever for the owner to refuse to acquire rents in the meanwhile. Therefore, a site will remain unused simply because it would earn zero rent in production. In many cases, however, a land site, once committed to a certain line of production, could not easily or without substantial cost be shifted to another line. Where the landowner anticipates that a better line of use will soon become available or is in doubt on the best commitment for the land, he will withhold the land site from use if his saving in "change-over cost" will be greater than his opportunity cost of waiting and of forgoing presently obtainable rents. The speculative site-owner is, then, performing a great service to consumers and to the market in not committing the land to a poorer productive use. By waiting to place the land in a superior productive use, he is allocating the land to the uses most desired by the consumers.

What probably confuses the Georgists is the fact that many sites lie unused and yet command a capital price on the market. The capital price of the site might even *increase* while the site continues to remain idle. This does not mean, however, that some sort of villainy is afoot. It simply means that no rents on the site are expected for the first few years, although it will earn positive rents thereafter. The capital value of ground land, as we have seen, sums up the discounted total of all future rents, and these rental sums may exert a tangible influence from a considerable distance in the future, depending on the rate of interest. There is therefore no mystery in the fact of a capital value for an idle site, or in its rise. The site is not being villainously withheld from production.[13]

Let us now consider the effect of a change in the supply of a land factor. Suppose that there is an increase in the supply of land in general, the supply of labor and savings remaining constant. If the new land is submarginal in relation to land presently in use, it is obvious that the new land will not be used, but will, instead, join its fellow submarginal land sites in idleness. If, on the other hand, the new land is superior, and therefore would earn a positive rent, it comes into use. There has been, however, no increase in labor or capital, so that it will not be profitable for these factors to be employed on a greater total amount of land than before. The new productive land, competing with the older land, will therefore push the previously just-marginal land into the submarginal category. Labor will always employ capital on the best land, and so the new acquisition of supramarginal land will oust the previously marginal land from production. Since the new land is more value-productive than the old marginal land which it replaces, the change increases the total output of goods in the society.

D. SUPPLY OF LABOR

In the case of a labor factor, the particular demand curve for its use will slope downward, and the particular supply curve of a labor factor for a specific use will slope upward to the right. In fact, since labor is the relatively nonspecific factor, the par-

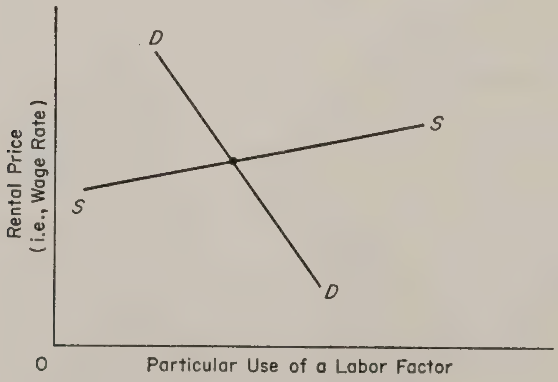
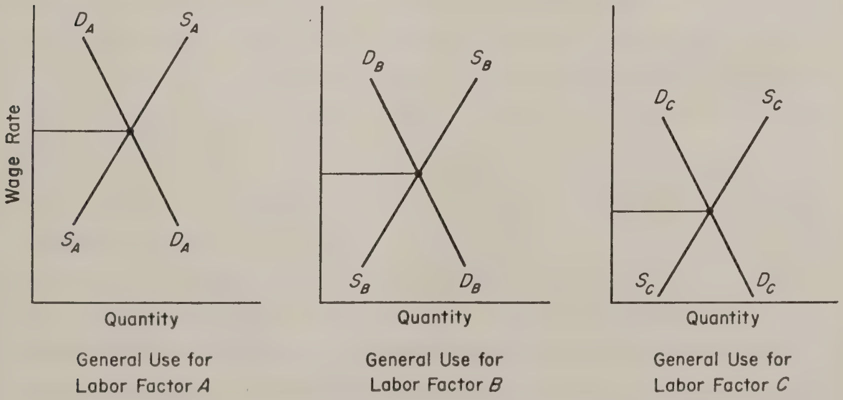


FIG. 63. SUPPLY OF AND DEMAND FOR LABOR FOR A PARTICULAR USE

ticular supply curve of a labor factor is likely to be flatter than the supply curve of the (usually more specific) land factor. Thus, the *particular* supply and demand curves for a labor factor may be as represented in Fig. 63.

The general demand curve for a labor factor will also slope downward in the relevant area. One of the complications in the analysis of labor is the alleged occurrence of a "backward supply curve of labor." This happens when workers react to higher wage rates by reducing their supply of labor hours, thus taking some of their higher incomes as increased leisure. This may very well occur, but it will not be relevant to the determination of the wages of a factor. In the first place, we saw that particular supply curves of a factor will be flat because of the competition of alternative uses. But even the *general* supply curve of a factor will be "forward-sloping," i.e., rightward-sloping. For labor, though hardly homogeneous, is a peculiarly nonspecific factor. Therefore, higher wage rates for one set of factors will tend to stimulate other laborers to train themselves or bestir themselves to enter this particular "market." Since skills differ, this does not mean that all wages will be equalized. It does mean, however, that *general* supply curves for a labor factor will also be forward-sloping. We might arrange an array of general supply and demand curves for various labor factors as in Fig. 64.



General Use for Labor Factor *A*

General Use for Labor Factor *B*

General Use for Labor Factor *C*

FIG 64. GENERAL SUPPLY AND DEMAND CURVES FOR VARIOUS LABOR FACTORS

The only case in which a backward supply curve may occur is for the total supply of *all* labor factors, and here the elements are so imprecise, since these factors are not homogeneous, that diagrams are of little avail in analysis. Yet this is an important question. As wage rates in general rise, in all their connexity between various specific labor markets, the supply of all labor (i.e., the quantity of labor-hours) can either increase or decrease, depending on the value scales of the individuals concerned. Rising wages may draw nonworking people into the labor force and induce people to work overtime or to obtain an extra part-time job. On the other hand, it may lead to increased leisure and a falling off in total hours worked. Rising wages may lead to population growth, swelling the total supply of labor "in general," or may lead to a cutback in population and the taking of some of the gains of increased wages in the form of increased leisure and an increased standard of living per person in the population.[14] Changes in the total supply or stock of labor-in-general will affect the particular markets by shifting all the specific schedules to the left if the stock decreases, or to the right if it increases.

A backward supply curve might conceivably take place for a land factor as well, when the owner has a high reserve demand for the land in order to enjoy its unused (in the catallactic sense) beauty. In that case, the land would have an increasing marginal disutility of visual enjoyment forgone, just as leisure is forgone in the process of expending labor. In the case of land, since there is not as great a connexity between land factors as there is between nonspecific labor factors, this circumstance will, in fact, impinge more directly on the market rental price. It may be revealed in a backward general supply curve for the *land factor*. Higher rental prices offered for his land will then induce the landowner to withhold more of it, taking the higher income partially in nonexchangeable consumption goods as well as in more money received. These cases may be rare in practice, but only because of the freely chosen values of the individuals themselves.

Thus, there is no reason for the would-be preserver of a monument or of a park to complain about the way the market treats his treasured objects. In the free society, these conservationists are at perfect liberty to purchase the sites and preserve them intact. They would, in effect, be deriving consumption services from such acts of preservation.

To return to labor, we have mentioned another component in wage rates. This is the *psychic* income, or psychic disutility, involved in any particular line of work. People, in other words, are often attracted to a certain line of work or to a specific job by other considerations than the monetary income. There may be positive psychic benefits and satisfactions derived from the particular type of work or from the particular firm employing the worker. Similarly, psychic disutilities may be attached to particular jobs.

These psychic elements will enter into the curves for particular uses. In order to isolate such elements, let us suppose for the moment that all laborers are equally value-productive, that labor is a homogeneous factor. In such a world, all wage rates in all occupations would be equal. All industries need not be equally value-productive for this result to occur. For as a result of the connexity of labor, i.e., its nonspecificity, laborers can enter wide ranges of occupations. If we assume, as we do for the moment, that all laborers are equally value-productive, then they will enter a high-wage industry to push the particular supply curve of labor in that industry downward, while quitting workers raise the supply curve of labor in the low-wage industry.

This conclusion follows from the general tendency toward the *uniformity of the price of any good on the market.* If all labor were homogeneous and therefore one factor, its price (wage rate) would be uniform throughout industry, just as the pure interest rate tends to be uniform.

Now let us relax one of the conditions of our hypothetical construct.[15] While retaining the assumption of equal productivity of all laborers, let us now introduce the possibility of psychic benefits or psychic disutilities accruing to workers at particular jobs. Some jobs are actively liked by most people, others actively disliked. These jobs may be common to certain industries or, more narrowly, to individual firms which may be considered particularly pleasant or unpleasant to work for. What will happen to money wage rates and to the supply of labor in the various occupations? It is obvious that, in the generally *disliked* occupation or firm, *higher* money wage rates will be necessary to attract and hold labor in that job. On the other hand, there will be so much labor competing in the generally liked jobs that they will pay *lower* wage rates. In other words, our amended conclusion is that not *money* wage rates, but *psychic* wage rates, will be equalized throughout—psychic wage rates being equal to money wage rates plus or minus a psychic benefit or psychic disutility component.

Many economists have assumed, implicitly or explicitly, an essential homogeneity among laborers. And they have made this assumption not, as we have done, as a purely temporary construct, but as an attempt to describe the real world. The question is an empirical one. It is a fundamental, empirically derived postulate of this book that there is a great variety among men in labor skills, in insight into future events, in ability, intelligence, etc. It seems empirically clear that this is the case.[16] The denials seem to be based on the simple faith that all men are "really" equal in all respects or could be made equal under proper conditions. Generally, the assumptions of uniformity and equality are made implicitly rather than explicitly, perhaps because the absurdities and obvious errors of the position would then become clear. For who would deny that not everyone could be an opera singer or a batting champion?

Some writers try to salvage the uniformity assumption by demonstrating that differences in wages occur solely because of the heavy *cost of training* for certain jobs. Thus, a doctor will earn more than a clerk because, in the nature of the task, a doctor will have to undergo the expenses of years of training (the expenses including actual money costs as well as opportunity costs forgone of earning money in such jobs as clerking). Therefore, in long-run equilibrium, money wage rates will not be uniform in the two fields, but income rates will be enough higher in medicine to just compensate for the loss, so that the *net* wage or income rates, considered over the person's lifetime, will be the same.

It is true that costs of training do enter in this way into market wage rates. But they do not account for all wage differentials by any means. Inherent differences in personal ability are also vital. Decades of training will not convert the average person into an opera star or a baseball champion.[17]

Many writers have based their analyses on the assumption of the homogeneity of all workers. Consequently, when they find that generally well-liked jobs, such as television-directing, pay more than such disliked jobs as ditch-digging, they tend to assume that there is injustice and chicanery afoot. A recognition of differences in labor productivity, however, eliminates this bugbear.[18] In such cases, a psychic component still exists that relatively lowers the wage of the better-liked job, but it is offset by the higher marginal value productivity and skill attached to the latter. Since TV-directing takes more skill than ditch-digging, or rather skill that fewer people have, the wage rates in the two occupations cannot be equalized.

E. PRODUCTIVITY AND MARGINAL PRODUCTIVITY

Great care must be taken in dealing with the productivity concept. In particular, there is danger in using a term such as "productivity of labor." Suppose, for example, we state that "the productivity of labor has advanced in the last century." The implication is that the cause of this increase came from within labor itself, i.e., because current labor is more energetic or personally skillful than previous labor. This, however, is not the case. An advancing capital structure increases the *marginal* productivity of labor, because the labor supply has increased less than the supply of capital goods. This increase in the marginal productivity of labor, however, is not due to some special improvement in the labor energy expended. It is due to the increased supply of capital goods. The causal agents of increased wage rates in an expanding economy, then, are *not* primarily the workers themselves, but the capitalist-entrepreneurs who have invested in capital goods. The workers are provided with more and better tools, and so their labor becomes relatively scarcer as compared to the other factors.[19]

That each man receives his marginal value product means that each man is paid what he is worth in producing for consumers. But this does not mean that increases in his worth over the years are necessarily caused by his own improvement. On the contrary, as we have seen, the rise is primarily due to the increasing abundance of capital goods provided by the capitalists.

It is, then, clearly impossible to impute absolute "productivity" to any productive factor or class of factors. In the absolute sense, it is meaningless to try to impute productivity to any factor, since all the factors are necessary to the product. We can discuss productivity only in *marginal terms,* in terms of the productive contribution of a single unit of a factor, given the existence of other factors. This is precisely what entrepreneurs do on the market, adding and subtracting units of factors in an attempt to achieve the most profitable course of action.

Another illustration of the error in attempting to attribute increased "productivity" to the workers themselves occurs within the various segments of the labor market. As we have seen, there is a definite *connexity* between all the occupations on the labor market, since labor is the prime nonspecific factor. As a result, while wage rates are not equalized, psychic wage rates will all tend, in the long run, to move together and maintain a given skill-differential between each occupation. Therefore, when a certain branch of industry expands its capital and production, an increase in DMVP, and therefore in wage rates, is not confined to that particular branch. Because of the connexity of the supply of labor, labor tends to leave other industries and enter the new ones, until finally all the wage rates throughout the labor market have risen, while maintaining the same differentials as before.

Suppose, for example, that there is an expansion of capital in the steel industry.[20] The MVP of the steel worker increases, and his wage rates go up. The increase in wage rates, however, is governed by the fact that the rise will attract workers from more poorly paid industries. For example, suppose that steel workers are receiving 25 grains of gold per hour, while domestic servants receive 15 grains per hour. Now, under the impetus of expansion, the MVP and hence the wage rate of the steel workers go up to 30 grains. The differential has been increased, inducing domestic servants to enter the steel industry, lowering steel wages and especially raising servants' wages, until the differential is re-established. Thus, a rise in capital investment in steel will increase the wages of workers in domestic service. The latter increase is clearly not caused by some sort of increase in the "productivity" or in the quality of the output of the domestic servants. Rather, their *marginal* value productivity has increased as a result of the greater scarcity of labor in the service trades.

The differentials will not remain precisely constant in practice, of course, since changing investment and changing methods also alter the types of skills required in the economy.

The shift in labor supply will not usually be as abrupt as in our example. Generally, it will take place from one occupation or one grade to a closely similar grade or occupation. Thus, more ditchdiggers might become foremen, more foremen supervisors, etc., so that shifts will take place from grade to grade. It is as if the labor market consisted of linked segments, a change in one segment transmitting itself throughout the chain from each link to the next.

F. A NOTE ON OVERT AND TOTAL WAGE RATES

It is "total wage rates" that are determined on the market. They tend to be equalized on the market and to be set at the DMVP of the worker. *Total wage rates* are the money paid out by the employer for labor services. They do not necessarily correspond to the "take-home pay" of the worker. The latter may be called the "overt wage rates." Thus, suppose that there are two competing employers bidding for the same type of labor. One employer, Mr. A, pays out a certain amount of money, not in direct wages, but in pension funds or other "welfare" benefits. These benefits, it must be realized, will not be added as a gift from the employer to the workers. They will not be additions to the total wage rates. Overt wage rates paid out by Mr. A will instead be correspondingly *lower* than those paid out by his rival, Mr. B, who does not have to spend on the "welfare" benefits.

To the employer, in other words, it makes no difference in what form workers cost him money, whether in "take-home pay" or in welfare benefits. But he cannot pay more than the worker's DMVP; i.e., the worker's total wage income is set by this amount. The worker, in effect, chooses in what *form* he would like his pay and in what proportion of net wage rates to "welfare" benefits. Part of these benefits is money that the employer might spend to provide particularly pleasant or plush working conditions for all or some of his employees. This cost is part of the total and is deducted from the overt wage rates of the employee.

The institutional manner of paying wage rates is a matter of complete indifference to our analysis. Thus, while "piece rates" or "time rates" may be more convenient in any given industry, they do not differ in essentials; both are wage rates paid for a certain amount of work. With time rates, the employer has in mind a standard of performance which he expects from a worker, and he pays according to that rate.[21]

G. THE "PROBLEM" OF UNEMPLOYMENT

An economic bugbear of our times is "unemployment." Not only is this considered the pre-eminent problem of the "depression" in the "business cycle"; it is also generally considered the primary "problem" of the "capitalist system," i.e., of the developed free market economy. "Well, at least socialism solves the unemployment problem," is supposed to be the most persuasive argument for socialism.

Of particular interest to us is the sudden emergence of the "unemployment problem" in economic theory. The Keynesians, in the mid-1930's, inaugurated the fashion of declaiming: Neoclassical economics is all right for its special area, but it assumes "full employment." Since, "orthodox" economics "assumes full employment," it holds true only so long as "full employment" prevails. If it does not, we enter a Keynesian wonderland where all economic truths are vitiated or reversed.

"Full employment" is supposed to be the condition of no unemployment and therefore the goal at which everyone aims.

In the first place, it should be emphasized that economic theory does not "assume" full employment. Economics, in fact, "assumes" *nothing*. The whole discussion of alleged "assumptions" reflects the bias of the epistemology of physics, where "assumptions" are made without originally knowing their validity and are eventually tested to see whether or not their consequents are correct. The economist does not "assume"; he *knows*. He *concludes* on the basis of logical deduction from self-evident axioms, i.e., axioms that are either logically or empirically incontrovertible.

Now what does economics *conclude* on the matter of unemployment or "full employment"? In the first place, there is no "problem" involved in the unemployment of either land or capital goods factors. (The latter condition is often known as "idle" or "unused capacity.") We have seen above that a crucial distinction between land and labor is that labor is relatively scarce. As a result, there will always be land factors remaining unused, or "unemployed."[22] As a further result, *labor factors will always be fully employed on the free market to the extent that laborers are so willing*. There is no *problem* of "unemployed land," since land remains unused for a good reason. Indeed, if this were not so (and it is conceivable that some day it will not be), the situation would be most unpleasant. If there is ever a time when land is scarcer than labor, then land will be fully employed, and some labor factors will either get a zero wage or else a wage below minimum subsistence level. This is the old classical bugbear of population pressing the food supply down to below-subsistence levels, and certainly this is theoretically possible in the future.

This is the only case in which an "unemployment problem" might be said to apply in the free market. But even here, if we consider the problem carefully, we see that there is no unemployment problem *per se*. For if what a man wants is simply a "job," he could work for zero wages, or even pay his "employer" to work for him. In other words, he could earn a "negative wage." Now this could never happen, for the good reason that labor is a disutility, especially as compared to leisure or "play." Yet all the worry about "full employment" makes it appear that the "job," and not the income from the job, is the great desideratum. If that were really the case, then there *would* be negative wages, and there would be no unemployment problem either.

The fact that no one will work for zero or negative wages implies that in addition to whatever enjoyment he receives, the laborer requires a monetary income from his work. So what the worker wants is not just "employment" (which he could always get in the last resort by *paying* for it) but *employment at a wage.*

But once this is recognized, the whole modern and Keynesian emphasis on employment has to be revalued. For the great missing link in their discussion of unemployment is precisely *the wage rate.* To talk of unemployment or employment without reference to a wage rate is as meaningless as talking of "supply" or "demand" without reference to a price. And it is precisely analogous. The demand for a commodity makes sense only with reference to a certain price. In a market for goods, it is obvious that whatever stock is offered as supply, it will be "cleared," i.e., sold, at a price determined by the demand of the consumers. No good need remain unsold if the seller wants to sell it; all he need do is lower the price sufficiently, in extreme cases even below zero if there is no demand for the good and he wants to get it off his hands. The situation is precisely the same here. Here we are dealing with labor services. Whatever supply of labor service is brought to market can be sold, but only if wages are set at whatever rate will clear the market.

We conclude that there can never be, on the free market, an unemployment problem. If a man wishes to be employed, he will be, provided the wage rate is adjusted according to his DMVP. But since no one wants to be simply "employed" without getting what he considers sufficient payment, we conclude that employment *per se* is not even a desired goal of human action, let alone a "problem."

The problem, then, is not employment, but employment at an above-subsistence wage. There is no guarantee that this situation will always obtain on the free market. The case mentioned above —scarcity of land in relation to labor—can lead to a situation where a worker's DMVP is below a subsistence wage for him. There also may be so little capital invested per worker that any wage will be below-subsistence for many people. Even in a relatively prosperous society there may be individual workers so infirm or lacking in skill that their particular talents could not command an above-subsistence wage. In that case, they could survive only through the gifts of those who are making above-subsistence wages.

But what of the able-bodied worker who "can't find a job"? This situation cannot obtain. In those cases, of course, where a worker insists on a certain type of job or a certain minimum wage rate, he may well remain "unemployed." But he does so only of his own volition and on his own responsibility. Thus, suppose that perhaps half the labor force suddenly insisted that they would not work unless they received a job in New York City in the television industry. Obviously, "unemployment" would suddenly become enormous. This is only a large-scale example of something that is always going on. There may be a shift of industry away from one town or region and toward another. A worker may decide that he wants to remain in the old town and insists on looking for a job there. If he fails to get one, however, the fault lies with himself and not with the "capitalist system." The same is true of a clerk who insists on working only in the TV industry, or of a radio employee who refuses to leave for television and insists on working only in radio. We are not condemning these workers here. We are simply saying that by their decisions they are themselves choosing not to be employed.

The able-bodied in a developed economy can always find work, and work that will pay an over-subsistence wage. This is so because labor is scarcer than land, and enough capital has been invested to raise the marginal value product of laborers sufficiently to pay such a wage. But while this is true in the general labor market, it is not necessarily true for particular labor markets, for particular regions or occupations, as we have just seen.

If a worker can withdraw from the labor market by insisting on a certain type of work or location of work, he can also withdraw by insisting on a certain minimum wage payment. Suppose a man insisted that he would not work at any job unless he is paid 500 gold ounces per year. If his best available DMVP is only 100 gold ounces per year, he will remain unemployed. Whenever a man insists on a wage higher than his DMVP, he will remain unemployed, i.e., *unemployed at the wage that he insists upon.* But then this unemployment is not a "problem," but a voluntary choice on the part of the idle person.[23]

The "full employment" provided by the free market is employment to the extent that workers wish to be employed. If they refuse to be employed except at places, in occupations, or at wage rates they would like to receive, then they are likely to be choosing unemployment for substantial periods.[24]

It might be objected that workers often do not *know* what job opportunities await them. This, however, applies to the owner of *any* goods up for sale. The very function of *marketing* is the acquisition and dissemination of *information* about the goods or services available for sale. Except to those writers who posit a fantastic world where everyone has "perfect knowledge" of all relevant data, the marketing function is a vital aspect of the production structure. The marketing function can be performed in the labor market, as well as in any other, through agencies or other means for the discovery of who or where the potential buyers and sellers of a particular service may be. In the labor market this has been done through "want ads" in the newspapers, employment agencies used by both employer and employee, etc.

Of course "full employment," as an absolute ideal, is absurd in a world where leisure is a positive good. A man may choose idleness in order to obtain leisure; he benefits (or believes he benefits) more from this than from working at a job.[25] We can see this truth more clearly if we consider the hours of the work week. Will anyone maintain that an eighty-hour work week is necessarily better than a forty-hour week? Yet the former clearly represents a fuller employment of labor than the latter.

One alleged example of a possible case of involuntary unemployment on the free market has been suggested by Professor Hayek.[26] Hayek maintains that when there is a shift from investment to consumption, and therefore a shortening of the production structure on the market, there will be a necessary temporary unemployment of workmen thrown out of work in the higher stages, lasting until they can be reabsorbed in the shorter processes of the later stages. It is true that there is a loss in income, as well as a loss in capital, from a shift to shorter processes. It is also true that the shortening of the structure means that there is a transition period when, at final wage rates, there will be unemployment of the men displaced from the longer processes. However, during this transition period there is no reason why these workers cannot bid down wage rates until they are low enough to enable the employment of all the workers during the transition. This transition wage rate will be lower than the new equilibrium wage rate. But at no time is there a necessity for unemployment.

The ever-recurring doctrine of "technological unemployment" —man displaced by the machine—is hardly worthy of extended analysis. Its absurdity is evident when we look at the advanced economy and compare it with the primitive one. In the former there is an abundance of machines and processes completely unknown to the latter; yet in the former, standards of living are far higher *for far greater numbers of people.* How many workers have been "displaced" because of the invention of the shovel? The technological unemployment motif is encouraged by the use of the term "labor-saving devices" for capital goods, which to some minds conjure up visions of laborers being simply discarded. Labor needs to be "saved" because *it is the pre-eminently scarce good* and because man's wants for exchangeable goods are far from satisfied. Furthermore, these wants would not be satisfied at all if the capital-goods structure were not maintained. The more labor is "saved," the better, for then labor is using more and better capital goods to satisfy more of its wants in a shorter amount of time.

Of course, there will be "unemployment" if, as we have stated, workers insist on their own terms for work, and these terms cannot be met. This applies to technological changes as well as any other. The clerk who, for some reason, insists nowadays on working *only* for a blacksmith or in an old-fashioned general store may well have chosen a large dose of idleness. Any workers who insisted on working in the buggy industry or nothing found themselves, no doubt, unemployed after the development of the automobile.

A technological improvement in an industry will tend to *increase* employment in that industry if the demand for the product is elastic downward, so that the greater supply of goods induces greater consumer spending. On the other hand, an innovation in an industry with *inelastic* demand downward will cause consumers to spend less on the more abundant products, contracting employment in that industry. In short, the process of technological innovation shifts workers from the inelastic-demand to the elastic-demand industries. One of the major sources of new employment demand is in the industry making the new machines.[27]

3. *Entrepreneurship and Income*

A. COSTS TO THE FIRM

We have seen the basis on which the prices of the factors of production and the interest rate are determined. Looked at from the point of view of an individual entrepreneur, payments to factors are money *costs*. It is clear that we cannot simply rest on the old classical law that prices of products tend, in the long run, to be equal to their costs of production. Costs are not fixed by some Invisible Hand, but are determined precisely by the total force of entrepreneurial demand for factors of production. Basically, as Böhm-Bawerk and the Austrians pointed out, *costs conform to prices,* and not vice versa. Confusion may arise because, looked at from the point of view of the individual firm rather than of the economist, it *appears* as if costs (at least in the sense of the prices of factors) are somehow given, and beyond one's control.[28] If a firm can command a selling price that will more than cover its costs, it remains in business; if not, it will have to leave. The illusion of externally determined costs is prevalent because, as we shall presently see, most factors can be employed in a wide variety of firms, if not industries. If we take the broader view of the economist, however, the various "costs," i.e., prices of factors, determined by their various DMVP's in alternative uses, are ultimately determined solely by consumers' demand for all uses. It must not be forgotten, furthermore, that changes in demand and selling price will change the prices and incomes of *specialized factors* in the same direction. The "cost curves" so fashionable in current economics assume fixed factor prices, thereby ignoring their variability, even for the single firm.

It might be noted that, in this work, there is none of that plethora and tangle of "cost curves" which fill the horizon of almost every recent "neoclassical" work in economics.[29] This omission has been deliberate, since it is our contention that the cost curves are at best redundant (thus violating the simplicity principle of Occam's Razor), and at worst misleading and erroneous.

As an explanation of the pricing of factors and the allocation of output it is obvious that cost curves add nothing new to discussion in terms of marginal productivity. At best, the two are reversible. This can be clearly seen in such texts as E. T. Weiler's *The Economic System* and George J. Stigler's *Theory of Price*.[30] But, in addition, the shift brings with it many grave deficiencies and errors. This is revealed in the very passage in which Stigler explains the reasons for his switch from a perfunctory discussion of productivity to a lengthy treatment of cost curves:

> The law of variable proportions has now been explored sufficiently to permit a transition to the cost curves of the individual firm. The fundamentally new element in the discussion will, of course, be the introduction of prices of the productive services. The transition is made here only for the case of competition—that is, the prices of the productive services are constant because the firm does not buy enough of any service to affect its price.[31]

But by introducing *given* prices of productive services, the contemporary theorist really abandons any attempt to explain these prices. This is one of the cardinal errors of the currently fashionable theory of the firm. It is highly superficial. One of the aspects of this superficiality is the assumption that prices of productive services are given, without any attempt to explain them.

To furnish an explanation, marginal productivity analysis is necessary.

Marginal productivity analysis and the profit motive are sufficient to explain the prices of productive factors and their allocation to various firms and industries in the economy. Furthermore, there are in production theory two important and interesting concepts involving periods of time. One is what we may call the "immediate run"—the market prices of commodities and factors on the basis of given stocks and speculative demands and given consumer valuations. The immediate run is important, since it provides an explanation of the actual market prices of all goods at any time. The other important concept is that of the "final price," or the long-run equilibrium price, i.e., the price that would be established in the ERE. This is important because it reveals the direction in which the immediate-run market prices tend to move. It also permits the analytic isolation of interest, as compared to profit and loss, in entrepreneurial incomes. In the ERE all factors will receive their discounted marginal value product, and interest will be pure time preference; there will be no profit and loss.

The interesting phases, then, are the immediate run and the long run. Yet cost-curve analysis deals almost exclusively with a hybrid intermediate phase known as the "short run." In this short run, "costs" are sharply divided into two categories: fixed (which must be incurred regardless of the amount produced) and variable (which vary with output). This whole construction is a highly artificial one. There is no actual "fixity" of costs. Any alleged fixity depends purely on the length of time involved. In fact, suppose that production is zero. The "cost-curve theorists" would have us believe that even at zero output there are fixed costs that must be incurred: rent of land, payment of management, etc. However, it is clear that if data are frozen—as they should be in such an analysis—and the entrepreneurs *expect a situation of zero output to continue indefinitely,* these "fixed" costs would become "variable" and disappear very quickly. The rent contract for land would be terminated, and management fired, as the firm closed its doors.

There are no "fixed" costs; rather there are different degrees of variability for different productive factors. Some factors are best used in a certain quantity over a certain range of output, while others yield best results over other ranges of output. The result is not a dichotomy into "fixed" and "variable" costs, but a condition of many degrees of variability for the various factors.[32]

Even if none of these difficulties existed, it is hard to see why the "short run" should be picked out for detailed analysis, when it is merely one way station, or rather a series of way stations, between the *important* periods of time: the immediate run and the long run. Analytically, the cost-curve approach is at best of little interest.[33]

With these *caveats,* let us now turn to an analysis of the costs of the firm. Let us consider what will happen to costs at alternate hypothetical levels of output. There are two elements that determine the behavior of *average costs,* i.e., total costs per unit output.

a) There are "physical costs"—the amounts of factors that must be purchased in order to obtain a certain physical quantity of output. These are the obverse of "physical productivity"—the amounts of the physical product that can be produced with various amounts of factors. This is a technological problem. Here the question is *not* marginal productivity, where one factor is varied while others remain constant in quantity. Here we concentrate on the scale of output when *all* factors are permitted to vary. *Where all factors and the product are completely divisible, a proportionate increase in the quantities of all the factors must lead to an equally proportionate increase in physical output.*[34] This may be called the law of "constant returns to scale."

b) The second determinant of average costs is factor prices. "Pure competition" theorists assume that these prices remain unchanged with a changing scale of output, but this is impossible.[35] As any firm's scale of output increases, it necessarily bids factors of production away from other firms, raising their prices in the process. And this is particularly true for labor and land factors, which cannot be increased in supply via new production. The increase in factor prices as output increases, combined with constant physical costs, raises the average money cost per unit output. We may therefore conclude that *if factors and product were perfectly divisible, average cost would always be increasing.*

In the productive world, perfect divisibility does not always, or even usually, obtain. Units of factors and of output are *indivisible,* i.e., they are not purely divisible into very small units. First, the *product* may be indivisible. Thus, suppose that 3 units of factor $A + 2$ units of factor B may combine to produce one refrigerator. Now it may be true that $6A + 4B$ will produce two refrigerators, according to our law of returns to scale. But it is also true that $4A + 3B$ will *not* produce one-and-a-fraction refrigerators. There are bound to be *gaps* where an increased supply of factors will *not* lead to an increased product, because of the technological indivisibility of the unit product.

In the areas of the gaps, average costs increase rapidly, since new factors are being hired with no product forthcoming; then, when expenditures on factors are increased sufficiently to produce more of the product, there is a precipitate *decline* in average cost compared to the situation during the gap. As a result, no businessman will knowingly invest in the area of the gaps. To invest more without yielding a product is sheer waste, and so businessmen will invest only in the trough points outside the gap areas.[36]

Secondly, and more important, *the productive factors* may be indivisible. Because of this indivisibility, it is not possible simply to double or halve the quantities of input of every one of the productive services simultaneously. Each factor has its own technological unit size. As a result, almost all business decisions take place in zones in which many factors have to remain constant while others (the more divisible ones) may vary. And these relative divisibilities and indivisibilities are due, not to variations in periods of time, but to the technological size of the various units. In any productive operation there will be many varieties of indivisibility.

Professor Stigler presents the example of a railroad track, a factor capable of handling up to 200 trains a day.[37] The track is most efficiently utilized when train runs total precisely 200 a day. This is the technologically "ideal" output and may be the one for which the track was designed. Now what happens when output is below 200? Suppose output is only 100 per day. The *divisible* factors of production will then be cut in half by the owners of the railroad. Thus, if engineers are divisible, the railroad will hire half as many engineers or hire its engineers for half their usual number of hours. But (and this is the critical point here) the railroad cannot cut the track in half and operate on half a track. The technological unit of "track" being what it is, the number of tracks has to remain at 1. Conversely, when output increases to 200 again, other productive services may be doubled, but the quantity of track remains the same.[38]

What happens should output increase to 250 cars a day—a 25% increase over the planned quantity? Divisible services such as engineers may be increased by one-fourth; but the track must either remain at 1—and be overutilized—or be increased to 2. If it is increased, the tracks will again be underutilized at 250, because the "ideal" output from the point of view of utilizing the tracks is now 400.

When an important indivisible factor is becoming *less and less underutilized,* the tendency will be for "increasing returns," for *decreasing average costs* as output increases. When an important indivisible factor is becoming *more and more overutilized,* there is a tendency for *increasing average costs.*

In some spheres of production, indivisibilities may be such that full utilization of one indivisible factor requires full utilization of *all.*[39] In that case, all the indivisible factors move together and can be lumped together for our purposes; they become the equivalent of *one* indivisible factor, such as the railroad track. In such cases again, average costs will first decline with an increase in output, as the increased output remedies an underutilization of the lumped indivisible factors. After the technologically most efficient point is reached, however, costs will increase, given the indivisible factors. The tendency for costs to decline will, in addition, be offset by the rise in factor prices caused by the increase in output.

In the overwhelming majority of cases, however, each factor will *differ* from the others in size and degree of divisibility. As a consequence, any size or combination chosen might utilize one indivisible factor most efficiently, but at the expense of *not utilizing* some other indivisible factor at peak efficiency. Suppose we consider a hypothetical schedule of average money cost at each alternative output. When we start at a very low level of output, all the indivisible factors will be underutilized. Then, as we expand production, average costs will decrease *unless* offset by the price rise for those divisible factors needed to expand production. As soon as one of the indivisible factors is fully utilized and becomes overworked, average costs will rise sharply. Later, a tendency toward decreasing costs sets in again as another underutilized factor becomes more fully utilized. The result is an alternating series of decreases and increases in average costs as output increases. Eventually, a point will be reached at which more indivisible factors will be overutilized than underutilized, and from then on the general trend of average cost as output increases will be upward. Before that point, the trend will be downward.

Mingling with these influences from the technological side of costs are the continuing rises in factor prices, which also become more important as output increases.

In sum, as Mises states:

> Other things being equal, the more the production of a certain article increases, the more factors of production must be withdrawn from other employments in which they would have been used for the production of other articles. Hence—other things being equal—average production costs increase with the increase in the quantity produced. But this general law is by sections superseded by the phenomenon that not all factors of production are perfectly divisible and that, as far as they can be divided, they are not divisible in such a way that full utilization of one of them results in full utilization of the other imperfectly divisible factors.[40]

Some indivisible factors, such as the railroad track, can be available in only one particular size, Other indivisible factors, such as machinery, can be built in various sizes. Cannot a small factory, then, use small-scale machinery which will be just as efficient as large-scale machinery in a larger factory, and would this not eliminate indivisibilities and result in constant costs? No, for here too, one particular size will probably be most efficient. Below the most efficient size, operating the machine will be more costly. Thus, as Stigler says, "fitting together of the parts of a ten-horsepower motor does not require ten times the labor necessary to fit those of a one-horsepower motor. Similarly, a truck requires one driver, whether it has a half-ton or two-ton capacity." [41]

It is also true that an over-sized machine will be more costly than the optimum. But this will be no limitation on the size of the firm, for a large firm can simply use several (smaller) optimum-sized machines instead of one huge machine.

Labor is usually treated as a perfectly divisible factor, as one that varies directly with the size of the output. But this is not true. As we have seen, the truck driver is not divisible into fractions. Further, management tends to be an indivisible production factor. So also salesmen, advertising, cost of borrowing, research expenditures, and even insurance for actuarial risk. There are certain basic costs in borrowing which simply arise from investigating, paper work, etc. These will tend to be proportionately smaller the larger the size—another indivisibility, with returns increasing over a certain area. Also, the broader the coverage, the lower insurance premiums will be.[42]

Then there are the well-known gains from the increase in the division of labor with larger outputs. The benefits from the division of labor may be considered indivisible. They arise from the specialized machines that must first be used with a larger product, and similarly from the increased labor skills of specialists. Here too, however, there is a point beyond which no further specialization is possible or where specialization is subject to increasing costs. Management has usually been stressed as particularly subject to overutilization. Even more important is the factor of *ultimate-decision-making ability,* which cannot be enlarged to the extent that management can.

What any given firm's size and output will be is therefore subject to a host of conflicting determinants, some impelling a limitation, some an expansion, of size. At what point any firm will settle depends on the concrete data of the actual case and cannot be decided by economic analysis. Only the actual entrepreneur, through the give and take of the market, can decide where the maximum-profit size is and can set the firm at that point. This is the task of the businessman and not of the economist.[43]

Furthermore, the cost-curve diagrams, so simple and smooth in the textbooks, misinterpret real conditions. We have seen that there are a whole host of determinants which tend at any point toward increasing and toward decreasing costs. It is, of course, true that an entrepreneur will seek to produce at the point of maximum profit, i.e., of maximum net returns over costs. But the factors that influence his decision are too numerous and their interactions too complex to be captured in cost-curve diagrams.

It is clear to almost everyone that the optimum size of a firm in some industries is larger than in others. The economic optimum for a steel plant is larger than the optimum barbershop. In industries where large-scale firms have demonstrated the most efficiency, however, many people have worried a great deal about an alleged tendency for decreasing costs to continue permanently and therefore for "monopoly" to result from ever-larger firms. It should be obvious, however, that there is no infinite tendency for ever-larger size; this is clear from the very fact that *every firm, at any time, always has a finite size* and that, therefore, an economic limit must have been imposed upon it from *some* direction. Furthermore, we have seen that the general rule of operating in a zone of diminishing marginal productivity for each factor, as well as the tendency for product prices to decline and factor prices to increase as output increases, establishes limits on the size of each firm. And, as a neglected point, we shall see that ultimate limits are set on the relative size of the firm by the necessity for *markets* to exist in every factor, in order to make it possible for the firm to calculate its profits and losses.[44]

Money costs will equal opportunity costs to the businessman only when he *plans* an investment in factors. To the extent that his money costs are "sunk" in any production process, they are committed irrevocably, and any future plans must consider them as irretrievably spent.[45] The businessman's market-supply curve will depend on his *present opportunity cost, not* his past money cost. For the businessman sells his goods at any price that will more than cover any further costs that must be incurred in selling them. As capital goods move toward final output in any stage of the production structure, more and more investment has been sunk into the process. Therefore, the *marginal* cost of further production (roughly the opportunity cost) becomes ever lower as the product moves toward final output and sale. This is the simple meaning of the usual cost-curve morass. When, for example, some costs are not "fixed," but irrevocable from the point of view of *further* short-run production, they are not included in the businessman's estimated costs of such further production. As we have seen above, the sale of immediate stock completely ready for sale is virtually "costless," since there are no further costs for *its* production—in the immediate run.[46] In the ERE, of course, all costs and investments will be adjusted, and irrevocably incurred costs will present no problem. In the ERE average money costs for all firms will equal the price of the product minus pure interest return to the capitalist-entrepreneurs, and also, as we shall see, minus the return to the "discounted marginal productivity of the owner," a factor which does not enter into the firm's money costs.[47, 48]

B. BUSINESS INCOME

The net incomes in the economy accrue to labor in wages, to landowners in ground rents (both wages and ground rents being "rents," i.e., unit-prices of productive factors), to capitalists in interest—all of which continue in the ERE—and profits and losses to entrepreneurs, which do not. (Ground rents are capitalized in the capital value of land, which therefore earns the interest rate in the ERE.) But what of the owners? Are their incomes exhausted by the category of entrepreneurial profit and loss, which we have studied in chapter 8, or will they continue to earn income beyond interest in the ERE?

So far we have seen that owners of businesses perform an *entrepreneurial* function: the function of uncertainty-bearing in an ever-changing world. Owners are also capitalists, who advance present funds to labor and land factors and earn interest. They may also be their own managers; in that case, they earn an implicit *wage of management,* since they are performing work which could also be performed by employees.[49] We have seen that, catallactically, labor is the personal energy of nonowners in production, and that this factor receives wages. When the owner does laboring work himself, then he too earns an implicit wage. This wage, of course, continues also in the ERE.

But is there a function which owning businessmen perform, and would still perform in the ERE, beyond the advancing of capital or possible managerial work? The answer is that they do execute another function for which they *cannot* hire other factors. It goes beyond the simple capital-advancing function, and it still continues in the ERE. For want of a better term, it may be called the *decision-making function,* or the *ownership function.* Hired managers may successfully direct production or choose production processes. But the ultimate responsibility and control of production rests inevitably with the *owner,* with the businessman whose property the product is until it is sold. It is the owners who make the decision concerning how much capital to invest and in what particular processes. And particularly, it is the *owners* who must choose the managers. The ultimate decisions concerning the use of their property and the choice of the men to manage it must therefore be made by the owners and by no one else. It is a function necessary to production, and one that continues in the ERE, since even in the ERE there are skills needed to hire proper managers and invest in the most efficient processes; and even though these skills remain constant, the efficiency with which they are performed will differ from one firm to another, and differing returns will be received accordingly.[50]

The decision-making factor is necessarily *specific* to each firm. We cannot call what it earns a *wage* because it can never be hired, and thus it does not earn an implicit wage. We may therefore call the income of this factor, the "rent of decision-making ability."[51] It is clear that this rent will be equal to the factor's DMVP, the amount which it specifically contributes to the firm's revenue. Since this ability differs from one owner to the next, the rents will differ accordingly. This difference accounts for the phenomena of "high-cost" and "low-cost" firms in any industry and indicates that differences in efficiency among firms are not solely functions of ephemeral uncertainty, but would persist even in the ERE.

Granting that the "*supra*marginal" (i.e., the lower-cost) firms in an industry are earning *rents of decision-making ability* for their owners, what of the "marginal" firms in the industry, the "high-cost" firms just barely in business? Are *their* owners earning rents of decision-making ability? Many economists have believed that these marginal firms earn no such income, just as they have believed that the marginal land earns zero rent. We have seen, however, that the marginal land earns *some* rent, even if "close to" zero. Similarly, the marginal firm earns *some* rent of decision-making ability. We can never say quantitatively how much it will be, only that it will be less than the corresponding "decision rents" of the *supra*marginal firms.

The belief that marginal firms earn no decision rents whatever seems to stem from two errors: (1) the assumption of mathematical continuity, so that successive points blend together; and (2) the assumption that "rent" is basically differential and therefore that the most inferior working land or firm must earn zero to establish the differential. We have seen, however, that rents are "absolute"—the earnings and marginal value products of factors. There is no necessity, therefore, for the poorest factor to earn zero, as we can see when we realize that *wages* are a subdivision of rents and that there is clearly no one making a zero wage. And so neither does the marginal firm earn a decision rent of zero.

That the decision rent earned by the marginal firm *must* be positive and not zero becomes evident if we consider a firm whose decision rent is only zero. Its owner would then be performing certain functions—making and bearing responsibility for ultimate decisions about his property and choosing the top managers—and yet receiving no return. And this in the ERE, where it cannot be simply the unforeseen result of entrepreneurial mistakes! But there will be no reason for the owner to continue performing these functions without a return. He will not continue to earn what is *psychically* a negative return, for while he remained in business he would continue to expend energy in ownership while receiving nothing in return.

To sum up, the income accruing to a business owner, in a changing economy, will be a composite of four elements:

Remains in ERE	*a*) interest on capital invested (uniform in ERE)
	b) wages of management, when owner is self-employed (set according to DMVP)
	c) rents of ownership-decision (set according to DMVP)
Disappears in ERE	*d*) entrepreneurial profit or loss

We have, so far, been dealing almost exclusively with *capitalist*-entrepreneurs. Since the entrepreneur is the actor in relation to natural uncertainty, the capital investor, who hires and makes advances to other factors, plays a peculiarly important entrepreneurial role. Making decisions concerning how much and where to invest, he is the driving force of the modern economy. *Laborers* are also entrepreneurs in the sense of predicting demand in the markets for labor and choosing to enter certain markets accordingly. Someone who emigrates from one country to another in expectation of a higher wage is in this sense an entrepreneur and may obtain a monetary profit or loss from his move. One important distinction between capitalist-entrepreneurs and laborer-entrepreneurs is that only the former may suffer *negative incomes* in production. Even if a laborer emigrates to a nation where pay turns out to be lower than expected, he absorbs only a differential, or "opportunity," loss from what he might have earned elsewhere. But he still earns a positive wage in production. Even in the unlikely event of a labor surplus vis à vis land, the laborer earns zero and not *negative* wages. But the capitalist-entrepreneur, the man who hires the other factors, can and does incur actual monetary losses from his entrepreneurial effort.

C. PERSONAL CONSUMER SERVICE

A particularly important category of laborer-entrepreneurs is that of the sellers of personal services to consumers. These laborers are generally capitalists as well. The sellers of such services—doctors, lawyers, concert artists, servants, etc.—are self-employed businessmen, who, in addition to interest on whatever capital they have invested, earn an implicit "managerial" wage for their labor.[52, 53] Thus, they earn a peculiar type of income: a business return consisting almost exclusively of labor income. We may call this type of work *direct labor,* since it is labor that serves *directly* as a consumers' good rather than hired as a factor of production. And since it is a consumers' good, this labor service is priced directly on the market.

The determination of the prices of these goods will be similar on the demand side to that of any consumers' good. Consumers evaluate marginal units of the service on their value scales and decide how much, if any, to purchase. There is a difference, however, on the supply side. The market-supply curves for most consumers' goods are vertical straight lines, since the sale of the product, *once produced,* is costless to the entrepreneur. He has no alternative use for it. The case of *personal service,* however, is different. In the first place, leisure is a definite alternative to work. In the second place, as a result of the connexity of the labor market, the worker can shift to a higher-paying occupation further up on the structure of production if his income in this occupation is unsatisfactory. As a result, for this type of consumers' good, the supply curve is likely to be a rather flat, forward-sloping one.

The seller of the service, or the *direct laborer,* earns, as do all factors, his DMVP to the consumer. He will allocate his labor to whatever branch, whether high or low in the structure of production, where his DMVP will be the highest, and where, as a consequence, his wage rate will be the greatest. The principles of allocation, then, between direct labor and indirect labor in production are the same as those among the various branches of indirect productive use.

D. MARKET CALCULATION AND IMPLICIT EARNINGS

We have seen that a musician or a doctor earns wages without being an employee; the wages of each are *implicit* in the income that he receives, even though they are received directly from the consumers.

In the real world, each *function* is not necessarily performed by a different person. The same person can be a landowner and a worker. Similarly, a particular firm, or rather its owner or owners, may own land and participate in the production of capital goods. The owner may *also* manage his own firm. In practice, the different sources of income can be separated only by referring to these incomes *as determined by prices on the market.* For example, suppose that a man owns a firm which invests its capital, owns its own ground land, and produces a capital good, and that he manages the plant himself. He receives a net income over a year's period of 1,000 gold ounces. How can he estimate the different *sources* of his income? Suppose that he had invested 5,000 gold ounces in the business. He looks around at the economy and finds that what he can pretty well call the ruling rate of interest, toward which the economy is tending, is 5%. He then concludes that 250 gold ounces of his net income was implicit interest. Next, he estimates approximately what he would have received in wages of management if he had gone to work for a competing firm rather than engaging in this business. Suppose he estimates that this would have been 500 gold ounces. He then looks to his ground land. What could he have received for the land if he had rented it out instead of using it himself in the business? Let us say that he could have received 400 ounces in rental income for the land.

Now, our owner received a net money income, as landowner-capitalist-laborer-entrepreneur, of 1,000 gold ounces for the year. He then estimates what his *costs* were, in money terms. These costs are not his explicit money expenses, which have already been deducted to find his net income, but his *implicit* expenses, i.e., his opportunities forgone by engaging in the business. Adding up these costs, he finds that they total:

250 gold ounces	interest
500 gold ounces	wages
400 gold ounces	rent
1150 gold ounces	total opportunity costs

Thus, the entrepreneur suffered a *loss* of 150 ounces over the period. If his opportunity costs had been less than 1,000, he would have gained an entrepreneurial profit.

It is true that such estimates are not precise. The estimates of what he would have received can never be wholly accurate. But this tool of *ex post calculation* is an indispensable one. It is the only way by which a man can guide his *ex ante* decisions, his future actions. By means of this calculation, he may realize that he is suffering a loss in this business. If the loss continues much longer, he will be impelled to shift his various resources to other lines of production. It is only by means of such estimates that an owner of more than one type of factor in the firm can determine his gains or losses in any situation and then allocate his resources to strive for the greatest gains.

A very important aspect of such estimates of implicit incomes has been overlooked: *there can be no implicit estimates without an explicit market!* When an entrepreneur receives income, in other words, he receives a complex of various functional incomes. To isolate them by calculation, *there must be in existence an external market to which the entrepreneur can refer.* This is an extremely important point, for, as we shall soon see in detail, this furnishes a most important limitation on the relative potential size of a single firm on the market.

For example, suppose we return for a moment to our old hypothetical example in which each firm is owned jointly by all its factor-owners. In that case, there is no separation at all between workers, landowners, capitalists, and entrepreneurs. There would be no way, then, of separating the wage incomes received from the interest or rent incomes or profits received. And now we finally arrive at the reason why the economy cannot consist completely of such firms (called "producers' co-operatives").[54] For, without an external market for wage rates, rents, and interest, there would be no rational way for entrepreneurs to allocate factors in accordance with the wishes of the consumers. No one would know where he could allocate his land or his labor to provide the maximum monetary gains. No entrepreneur would know how to arrange factors in their most value-productive combinations to earn the greatest profit. There could be no efficiency in production because the requisite knowledge would be lacking. The productive system would be in complete chaos, and everyone, whether in his capacity as consumer or as producer, would be injured thereby. It is clear that a world of producers' co-operatives would break down for any economy but the most primitive, because it could not calculate and therefore could not arrange productive factors to meet the desires of the consumers and hence earn the highest incomes for the producers.

E. VERTICAL INTEGRATION AND THE SIZE OF THE FIRM

In the free economy, there *is* an explicit time market, labor market, and land-rent market. It is clear that while chaos would ensue from a world of producers' co-operatives, other critical points even before that would, as it were, introduce *little bits of chaos* into the productive system. Thus, suppose that workers are separated from capitalists, but that *all* capitalists own their own ground land. Further, suppose, that for one reason or another, no capitalist will be able to rent out his land to some *other* firm. In that case, land and a particular capital and production process are indissolubly wedded to each other. There would be no rational way to allocate land in production, since it would have no explicit price anywhere. Since producers would suffer heavy losses, the *free market would never establish such a situation.* For the free market always tends to conduct affairs so that entrepreneurs make the greatest profit through serving the consumer best and most efficiently. Since absence of calculation creates grave inefficiencies in the system, it also causes heavy losses. Such a situation (absence of calculation) would therefore never be established on a free market, particularly after an advanced economy has already developed calculation and a market.

If this is true for such cases as a world of producers' co-operatives and the absence of a rent market, it also holds true, on a smaller scale, for "vertical integration" and the size of a firm. Vertical integration occurs when a firm produces not only at *one* stage of production, but over two or more stages. For example, a firm becomes so large that it buys labor, land, and capital goods of the fifth order, then works on these capital goods, producing other capital goods of the fourth order. In another plant, it then works on the fourth-order capital goods until they become third-order capital goods. It then sells the *third-order* product.

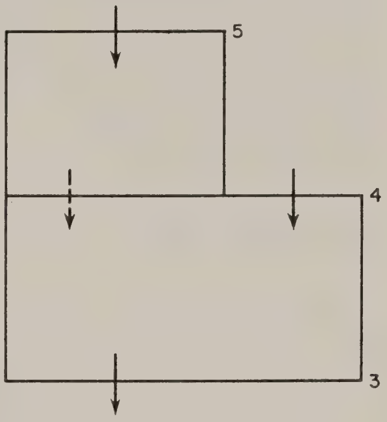


Fig. 65. Movement of Goods and Services in a Vertically Integrated Firm

Vertical integration, of course, lengthens the production period for *any firm,* i.e., it lengthens the time before *the firm* can recoup its investment in the production process. The interest return then covers the time for two or more stages rather than one.[55] There is a more important question involved, however. This is the role of implicit earnings and calculation in a vertically integrated firm. Let us take the case of the integrated firm mentioned above (see Fig. 65).

This diagram depicts a vertically integrated firm; the arrows represent the movement of goods and services (not of money). The firm buys labor and land factors at both the fifth and the fourth stages; it also makes the fourth-stage capital goods itself and uses them in another plant to make a lower-stage good. This movement *internal* to the firm is expressed by the dotted arrow.

Does such a firm employ calculation within itself, and if so, how? Yes. The firm assumes that it *sells itself* the fourth-rank capital good. It separates its net income as a producer of fourth-rank capital from its role as producer of third-rank capital. It calculates the net income for each separate division of its enterprise and allocates resources according to the profit or loss made in each division. *It is able to make such an internal calculation only because it can refer to an existing explicit market price for the fourth-stage capital good.* In other words, a firm can accurately estimate the profit or loss it makes in a stage of its enterprise only by finding out the *implicit* price of its internal product, and it can do this only if an *external* market price for that product is established elsewhere.

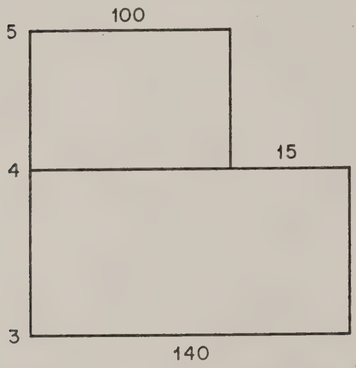


Fig. 66. Calculation within a Vertically Integrated Firm

To illustrate, suppose that a firm is vertically integrated over two stages, with each stage covering one year's time. The general rate of interest in the economy tends towards 5% (per annum). This particular firm, say, the Jones Manufacturing Company, buys and sells its factors as shown in Fig. 66.

This vertically integrated firm buys factors at the fifth rank for 100 ounces and original factors at the fourth rank for 15 ounces; it sells the final product at 140 ounces. It *seems* that it has made a handsome entrepreneurial profit on its operations, but can it find out which stage or stages is making this profitable showing? If there is an external market for the product of the stage that the firm has vertically integrated (stage 4), the Jones Company is able to calculate the profitability of specific *stages* of its operations. Suppose, for example, that the price of the fourth-order capital good on the external market is 103 ounces. The Jones Company then estimates its *implicit* price for this intermediate product at what it *would have brought on the market* if it had been sold there. This price will be about 103 ounces.[56] Assuming that the price is estimated at 103, then the total amount of money spent by Jones' lower-order plant on factors is 15 (explicit, on original factors) plus 103 (implicit, on capital goods) for a total of 118.

Now the Jones Company can calculate the profits or losses made at *each stage* of its operations. The "higher" stage bought factors for 100 ounces and "sold" them at 103 ounces. It made a 3% return on its investment. The lower stage bought its factors for 118 ounces and sold the product for 140 ounces, making a 29% return. It is obvious that, instead of enjoying a general profitability, the Jones Company suffered a 2% entrepreneurial loss on its earlier stage and gained a 24% profit on its later stage. Knowing this, it will shift resources from the higher to the lower stage in accordance with their respective profitabilities—and therefore in accordance with the desires of consumers. Perhaps it will abandon its higher stage altogether, buying the capital good from an external firm and concentrating its resources in the more profitable lower stage.

On the other hand, suppose that there is no external market, i.e., that the Jones Company is the only producer of the intermediate good. In that case, it would have no way of knowing which stage was being conducted profitably and which not. It would therefore have no way of knowing how to allocate factors to the various stages. There would be no way for it to estimate any implicit price or opportunity cost for the capital good at that particular stage. Any estimate would be completely arbitrary and have no meaningful relation to economic conditions.

In short, if there were no market for a product, and all of its exchanges were internal, there would be no way for a firm or for anyone else to determine a price for the good. A firm can estimate an implicit price when an external market exists; but when a market is absent, the good can have no price, whether implicit or explicit. Any figure could be only an arbitrary symbol. Not being able to calculate a price, the firm could not rationally allocate factors and resources from one stage to another.

Since the free market always tends to establish the most efficient and profitable type of production (whether for type of good, method of production, allocation of factors, or size of firm), we must conclude that complete vertical integration for a capital-good product can never be established on the free market (above the primitive level). *For every capital good, there must be a definite market in which firms buy and sell that good.* It is obvious that this economic law *sets a definite maximum to the relative size of any particular firm on the free market.*[57] Because of this law, firms cannot merge or cartelize for complete vertical integration of stages or products. Because of this law, there can never be One Big Cartel over the whole economy or mergers until One Big Firm owns all the productive assets in the economy. The force of this law multiplies as the area of the economy increases and as islands of noncalculable chaos swell to the proportions of masses and continents. As the area of incalculability increases, the degrees of irrationality, misallocation, loss, impoverishment, etc., become greater. Under *one* owner or *one* cartel for the whole productive system, there would be no possible areas of calculation at all, and therefore complete economic chaos would prevail.[58]

Economic calculation becomes ever more important as the market economy develops and progresses, as the stages and the complexities of type and variety of capital goods increase. Ever more important for the maintenance of an advanced economy, then, is the preservation of *markets* for all the capital and other producers' goods.

Our analysis serves to expand the famous discussion of the possibility of economic calculation under socialism, launched by Professor Ludwig von Mises over forty years ago.[59] Mises, who has had the last as well as the first word in this debate, has demonstrated irrefutably that a socialist economic system cannot calculate, since it lacks a market, and hence lacks prices for producers' and especially for capital goods.[60] Now we see that, paradoxically, the reason why a socialist economy cannot calculate is *not* specifically because it is socialist! Socialism is that system in which the State forcibly seizes control of all the means of production in the economy. The reason for the impossibility of calculation under socialism is that *one agent* owns or directs the use of all the resources in the economy. It should be clear that it does not make any difference whether that one agent is the State or one private individual or private cartel. Whichever occurs, there is no possibility of calculation anywhere in the production structure, since production processes would be only internal and without markets. There could be no calculation, and therefore complete economic irrationality and chaos would prevail, whether the single owner is the State or private persons.

The difference between the State and the private case is that our economic law debars people from ever establishing such a system in a free-market society. Far lesser evils prevent entrepreneurs from establishing even islands of incalculability, let alone infinitely compounding such errors by eliminating calculability altogether. But the State does not and cannot follow such guides of profit and loss; its officials are not held back by fear of losses from setting up all-embracing cartels for one or more vertically integrated products. The State is free to embark upon socialism without considering such matters. While there is therefore no possibility of a one-firm economy or even a one-firm vertically integrated product, there is much danger in an attempt at socialism by the State. A further discussion of the State and State intervention will be found in chapter 12 of this book.

A curious legend has become quite popular among the writers on the socialist side of the debate over economic calculation. This runs as follows: Mises, in his original article, asserted "theoretically" that there could be no economic calculation under socialism; Barone proved mathematically that this is false and that calculation is possible; Hayek and Robbins conceded the validity of this proof but then asserted that calculation would not be "practical." The inference is that the argument of Mises has been disposed of and that all socialism needs is a few practical devices (perhaps calculating machines) or economic advisers to permit calculation and the "counting of the equations."

This legend is almost completely wrong from start to finish. In the first place, the dichotomy between "theoretical" and "practical" is a false one. In economics, all arguments are theoretical. And, since economics discusses the real world, these theoretical arguments are by their nature "practical" ones as well.

The false dichotomy disposed of, the true nature of the Barone "proof" becomes apparent. It is not so much "theoretical" as irrelevant. The proof-by-listing-of-mathematical-equations is no proof at all. It applies, at best, only to the evenly rotating economy. Obviously, our whole discussion of the calculation problem applies to the real world and *to it only. There can be no calculation problem in the ERE because no calculation there is necessary*. Obviously, there is no need to calculate profits and losses when all future data are known from the beginning and where there *are no* profits and losses. In the ERE, the best allocation of resources proceeds automatically. For Barone to demonstrate that the calculation difficulty does not exist in the ERE is not a solution; it is simply a mathematical belaboring of the obvious.[61] The difficulty of calculation applies to the real world only.[62]

4. *The Economics of Location and Spatial Relations*

One very popular subdivision of economics has been "international trade." In a purely free market, such as we are analyzing in the bulk of this work, there can be no such thing as an "international trade" problem. For nations might then possibly continue as cultural expressions, but not as economically meaningful units. Since there would be neither trade nor other barriers between nations nor currency differences, "international trade" would become a mere appendage to a general study of interspatial trade. It would not matter whether the trade was within or outside a nation.[63]

The laws of the free market that we have been enunciating apply, therefore, to the whole extent of the market, i.e., to the "world" or the "civilized world." In the case of a completely isolated country, the laws would apply throughout that area. Thus, the pure interest rate will tend to be uniform throughout the world, prices for the same good will tend to be uniform throughout, and, therefore, so will wages for the same type of labor.

Wage rates will tend toward uniformity for the same labor in different geographical areas in precisely the same way as from industry to industry or firm to firm. Any temporary differential will induce laborers to move from the low- to the high-wage area and businesses to move from the latter to the former, until equilibrium is reached. Once again, just as in the more general case considered above, workers may have particular positive or negative attachments toward working in a certain *area,* just as we saw they may have toward working in a certain industry. There may be a general psychic benefit from living and working in a certain place, and a psychic disutility involved in working at some other location. Since it is *psychic,* not money, wage rates that are being equalized, money wage rates will be equalized throughout the world *plus* or *minus* negative or positive psychic attachment components.

That the prices of each good will be uniform throughout the world rests on a precise definition of the term "good." Suppose, for example, that wheat is grown in Kansas and that the bulk of the consumers of the wheat are in New York. The wheat in Kansas, even when ready for shipment, is *not* the same good as the wheat in New York. It may be the same physical-chemical bundle, but it is not the same *good* vis à vis its objective use-value to the consumers. In short, wheat in Kansas is a higher-stage capital good than wheat in New York (when the consumer is in New York rather than in Kansas.) Transporting the wheat to New York is a stage in the process of production. The price of wheat in Kansas will then tend to equal the price of wheat in New York *minus* the necessary costs of transport from Kansas to New York.

What determines how people and businesses will be distributed over the face of the earth? Obviously, the major factor is the marginal productivity of labor. This will differ from location to location in accordance with the distribution of natural resources and the distribution of capital equipment inherited from ancestors. Another factor influencing location will be positive or negative attachments to certain areas, as we have seen above. The actual dispersal over the face of the earth is caused chiefly by the distribution of productive land and natural resources over the earth's surface. This has been one of the chief forces limiting the concentration of industry, the size of each firm, and population in purely industrial areas.[64]

In considering the location of industry, entrepreneurs must account for costs of transportation from raw material sites to the centers of consumer population. Certain areas of the world will tend to have higher costs of transportation than other parts. Wheat is further away in New York than in Kansas, and the theater further away in Kansas. Some areas may enjoy lower transport costs for the bulk of consumers' goods, while others may have higher transport costs. Thus, Alaska will probably have higher transport costs for its consumers' goods than less remote areas such as San Francisco. Therefore, to obtain the same products, Alaskan consumers must be willing to pay higher prices in Alaska than in San Francisco, even though purchasing power and prices are uniform throughout the world. As a result, the "cost component" for anyone working in Alaska will be a certain positive amount. Because of the transport problem, the same money wage in Alaska will buy fewer goods than in San Francisco. This increased "cost of living" establishes a positive cost component in the wage, so that for similar labor a worker would require a higher money wage to work in Alaska than elsewhere.

If the costs attached to a geographical area are particularly high or low, a positive or a negative cost component will be attached to the wage rate in that area. Instead of saying that money wage rates for the same type of labor will be equalized throughout the world, we must say rather that there will be a tendency for equalization of money wage rates *plus* or *minus* the attachment component, and *plus* or *minus* the cost component, for every geographic area.[65]

The purchasing power of the monetary unit will also be equalized throughout the world. This case will be treated below in chapter 11 on Money.

The tendency of an advancing market economy, of course, is to lower transportation costs, i.e., to increase labor productivity in the transport field. Other things being equal, then, the cost components tend to become relatively less important as the economy progresses.

We have seen that a "good" must be considered as homogeneous in *use-value,* and not in physical substance.[66] Wheat in Kansas was a different good from wheat in New York. Some economists have taken the law that all goods tend to be uniform in price throughout the world economy to mean that all *physically* homogeneous things will be equal in price. But a difference in position with respect to consumers makes a physically identical thing a different good. Suppose, for example, that two firms are producing a certain product, say cement, and that one is located in Rochester and one in Detroit. Let us say that the bulk of the consumers of cement are in New York City.

Let us call the cement produced in Rochester, C_r, and the cement produced in Detroit, C_d. Now, in equilibrium, the price of C_r in New York City will equal the price of C_r in Rochester plus the freight cost from Rochester to New York. Also, in equilibrium, the price of C_d in New York City will equal the price of C_d in Detroit plus the freight cost from Detroit to New York. Which cement prices will be equal *to each other* in equilibrium? Many writers maintain that the price of C_r in Rochester will be equal to the price of C_d in Detroit, i.e., that the "mill prices," or the "f.o.b. prices," of cement will be equal in each of the two localities in equilibrium. But it is clear that these writers have adopted the confusion of treating "good" in the technological rather than in the use-value sense.[67]

We must, in short, take the point of view of the *consumer*—the man who uses the good—and he is in New York City. From his point of view, cement in Detroit is a far different good from cement in Rochester, since Rochester is closer to him and freight costs are greater from Detroit. From his point of view, the *homogeneous* goods are: C_r in New York City and C_d in New York City. Wherever it comes from, cement *at the place where he must use it* is the homogeneous good for the consumer.

Therefore, in equilibrium, it is C_r in New York City that will be equal to C_d in New York City—and these are the "delivered prices" of cement to the consumer.[68] Substituting this equality in the above equations, we see that it implies that the price of C_r in Rochester, plus freight cost from Rochester to New York, will equal the price of C_d in Detroit, plus freight cost from Detroit to New York. The freight costs at any time are readily calculable, and *ceteris paribus,* they will be greater for longer distances. In other words, in equilibrium on the free market, the price of C_r

in Rochester is equal to the price of C_d in Detroit *plus* the *differential* in freight costs for the longer as compared to the shorter distance to the consumer. Generalizing, *the "mill price" of cement at a shorter distance from the consumer will equal the "mill price" of cement at the longer distance plus the freight differential.* This is applicable not only to cement, but to every product in the economic system, and not only to products serving ultimate consumers, but also to those to be "consumed" by lower-order capitalists.

In proportion as firms are more distantly located from the consumer, they will then not be able to remain in business unless their average costs at the mill are sufficiently lower than those of their competitors to compensate for the increased freight costs. This is not, as might be thought, a "penalty" on the "technological superiority" of the distant firm, for the latter is *inferior* with respect to the important economic factor of location. It is precisely this mechanism that helps to determine the location of firms and assures that firms will be economically located in relation to the consumer. The influence of the location-difference factor in the price of a product will, of course, depend upon the proportion that freight costs bear to the other costs of producing the good. The higher the proportion, the greater the influence.

A firm with a location closer to the consumer market therefore has a spatial advantage conferred by its location. Given the same costs in other fields as its competitors, it earns a profit from its superior location. The gains of location will be imputed to the site value of the ground land of the plant. The owner of the site obtains its marginal value product. Therefore, gains to a firm resulting from improvement in locational advantage, as well as losses resulting from a locational disadvantage, will accrue as changes in ground rent and capital value to the owner of the specific site, whether the owner be the firm itself or someone else.

5. *A Note on the Fallacy of "Distribution"*

Ever since the days of early classical economics, many writers have discussed "distribution theory" as if it were completely separate and isolated from production theory.[69] Yet we have seen that "distribution" theory is simply production theory. The receivers of income earn wages, rent, interest, and increases in capital values; and these earnings are the prices of productive factors. The theory of the market determines the prices and incomes accruing to productive factors, thereby also determining the "functional distribution" of the factors. "Personal distribution"—how much money each *person* receives from the productive system—is determined, in turn, by the functions that he or his property performs in that system. There is no separation between production and distribution, and it is completely erroneous for writers to treat the productive system as if producers dump their product onto some stockpile, to be later "distributed" in some way to the people in the society. "Distribution" is only the other side of the coin of production on the market.

Many people criticize the free market as follows: Yes, we agree that production and prices will be allocated on the free market in a way best fitted to serve the needs of the consumers. But this law is necessarily based on a *given initial distribution of income* among the consumers; some consumers begin with only a little money, others with a great deal. The market system of production can be commended only if the original distribution of income meets with our approval.

This initial distribution of income (or rather of money assets) did not originate in thin air, however. It, too, was the necessary consequence of a market allocation of prices and production. It was the consequence of serving the needs of previous consumers. It was not an arbitrarily given distribution, but one that itself emerged from satisfying consumer needs. It too was inextricably bound up with production.

As we saw in chapter 2, a person's presently owned property could have been ultimately obtained in only one of the following ways: through personal production, voluntary exchange for a personal product, the finding and first using of unappropriated land, or theft from a producer. On a free market, only the first three can obtain, so that any "distribution" served by producers was in itself the result of free production and exchange.

Suppose, however, that at some preceding time the bulk of the wealthy consumers had acquired their property through theft and not through serving other consumers on the free market. Does this not instill a "built-in bias" into the market economy, since future producers must satisfy demands ensuing from unjust incomes?

The answer is that after the initial period, the effect of unjust incomes becomes less and less important. For in order to keep and increase their ill-gotten gains, the former robbers, now that a free economy is established, have to invest and recoup their funds so as to serve consumers correctly. If they are not fit for this task, and their exploits in predation have certainly not trained them for it, then entrepreneurial losses will diminish their assets and shift them to more able producers.

6. *A Summary of the Market*

The explanation of the free economic system constitutes a great architectural edifice. Starting from human action and its implications, proceeding to individual value scales and a money economy, we have demonstrated that the quantity of goods produced, the prices of consumers' goods, the prices of productive factors, the interest rate, profits and losses, all can be explained by the same deductive apparatus. Given a stock of land and labor factors, given existing capital goods inherited from the past, given individual time preferences (and, more broadly, technological knowledge), the capital goods structure and total production is determined. Individual preferences set prices for the various consumers' goods, and the alternative combinations of various factors in their production set the marginal value-productivity schedules of these factors. Ultimately, the marginal value product accruing to capital goods is resolved into returns to land, labor, and interest for time. The point at which a land or labor factor will settle on its DMVP schedule will be determined by the stock available. Since each factor will operate in an area of diminishing physical and certainly diminishing value returns, any increased stock of the factor, other things being equal, will enter at a lower DMVP point. The intersecting points on the DMVP schedules will yield the prices of the factors, also known as "rents" and "wage rates" (in the case of labor factors). The pure interest rate will be determined by the time-preference schedules of all individuals in the economy. Its chief expression will be not in the loan market, but in the discounts between prices in the various stages of production. Interest on the loan market will be a reflection of this "natural" interest rate. All the prices of each good, as well as the interest rate, will be uniform throughout the entire market. The capital value of every durable good will equal the discounted value of the sum of future rents to be obtained from the good, the discount being the rate of interest.

All this is a picture of the evenly rotating economy—the equilibrium situation toward which the real economy is always tending. If consumer valuations and the supply of resources remained constant, the relevant ERE would be reached. The forces driving toward the ERE are the profit-seeking entrepreneurs, who take the lead in meeting the uncertainties of the real world. By seeking out discrepancies between existing conditions and the equilibrium situation and remedying them, entrepreneurs make profits; those businessmen who unwittingly add to the maladjustments on the market are penalized with losses. Thus, to the extent that producers wish to make money, they drive toward ever more efficient servicing of the desires of the consumers—allocating resources to the most value-productive areas and away from the least value-productive. The (monetary) value productivity of a course of action depends on the extent to which it serves consumer needs.

But consumer valuations and supplies of resources are always changing, so that the ERE goal always changes as well and is never reached. We have analyzed the implications of changing elements in the economy. An increase in the labor supply may lower the DMVP of labor and hence wage rates, or raise them because of the further advantages of the division of labor and a more extended market. Which will occur depends on the optimum population level. Since labor is relatively more scarce than land, and relatively nonspecific, there will always be idle and zero-rent land, while there will never be involuntarily idle or zero-wage labor. An increase or decrease in the supply of "submarginal" land will have no effect on production; an increase in *supra*marginal land will increase production and render hitherto marginal land submarginal.

Lower time preferences will increase capital investment and thereby lengthen the structure of production. Such lengthening of the production structure, increasing the supply of capital goods, is the only way for man to advance from his bare hands and empty acres of land to more and more civilized standards of living. These capital goods are the necessary way stations on the road to higher total production. But they must be maintained and replaced as well as initially produced if people wish to keep their higher standard over any length of time.

To expand production, the important consideration is not so much technological improvement as greater capital investment. At no time has invested capital exhausted the best technological opportunities available. Many firms still use old, unimproved processes and techniques simply because they do not have the capital to invest in new ones. They would know how to improve their plant if capital were available. Thus, while the state of technology is ultimately a very important consideration, at no given time does it play a *direct* role, since the *narrower* limit on production is always the supply of capital.

In a progressing economy, given a constant supply of money, increased investment and a longer capital structure bring about lower money prices for factors and still lower prices for consumers' goods. "Real" factor prices (corrected for changes in the purchasing power of the monetary unit) increase. In net terms, this means that real land rents and real wage rates will increase in the progressing economy. Interest rates will fall as time-preference rates drop and the proportion of gross investment to consumption increases.

If rents are earned by a durable factor, they can be and are "capitalized" on the market, i.e., they have a capital value equivalent to the discounted sum of their expected future rents. Since land is a form of investment on the market just as are shares of a firm, its future rents will be capitalized so that land will tend to earn the same uniform interest rate as any other investment. In a progressing economy, the real capital value of land will increase, although the value will fall in money terms. To the extent that future changes in the value of land can be foreseen, they will be immediately incorporated into its present capital value. Therefore, future owners of land will benefit by future increases in its real capital value only to the extent that previous owners failed to anticipate the increase. To the extent that it was anticipated, the future owners will have paid it in their purchase price.

The course of change in a retrogressing economy will be the opposite. In a *stationary* economy, total production, the capital structure, real wages per capita, real capital values of land, and the rate of interest will remain the same, while the allocation of factors of production and the relative prices of various products will vary.[70]

10

Monopoly and Competition

1. *The Concept of Consumers' Sovereignty*

A. CONSUMERS' SOVEREIGNTY VS. INDIVIDUAL SOVEREIGNTY

We have seen that in the free market economy people will tend to produce those goods most demanded by the consumers.[1] Some economists have termed this system "consumers' sovereignty." Yet there is no compulsion about this. The choice is purely an independent one by the producer; his dependence on the consumer is purely voluntary, the result of his own choice for the "maximization" of utility, and it is a choice that he is free to revoke at any time. We have stressed many times that the pursuit of monetary return (the consequence of consumer demand) is engaged in by each individual *only to the extent that other things are equal.* These other things are the individual producer's psychic valuations, and they may counteract monetary influences. An example is a laborer or other factor-owner engaged in a certain line of work at less monetary return than elsewhere. He does this because of his enjoyment of the particular line of work and product and/or his distaste for other alternatives. Rather than "consumers' sovereignty," it would be more accurate to state that in the free market there is *sovereignty of the individual:* the individual is sovereign over his own person and actions and over his own property.[2] This may be termed *individual self-sovereignty.* To earn a monetary return, the individual producer must satisfy consumer demand, but the extent to which he obeys this expected monetary return, and the extent to which he pursues other, nonmonetary factors, is entirely a matter of his own free choice.

The term "consumers' sovereignty" is a typical example of the abuse, in economics, of a term ("sovereignty") appropriate only to the *political* realm and is thus an illustration of the dangers of the application of metaphors taken from other disciplines. "Sovereignty" is the quality of ultimate political power; it is the power resting on the use of violence. In a purely free society, each individual is sovereign over his own person and property, and it is therefore this self-sovereignty which obtains on the free market. No one is "sovereign" over anyone else's actions or exchanges. Since the consumers do not have the power to coerce producers into various occupations and work, the former are not "sovereign" over the latter.

B. PROFESSOR HUTT AND CONSUMERS' SOVEREIGNTY

The metaphorical shibboleth of "consumers' sovereignty" has misled even the best economists. Many writers have used it as an ideal with which to contrast the allegedly imperfect free market system. An example is Professor W. H. Hutt of the University of Capetown, who has made the most careful defense of the concept of consumers' sovereignty.[3] Since he is the originator of this concept and his use of the term is widespread in the literature, his article is worth particular attention. It will be used as the basis for a critique of the concept of consumers' sovereignty and its implications for the problems of competition and monopoly.

In the first part of his article, Hutt defends his concept of consumers' sovereignty against the criticism that he has neglected the desires of *producers*. He does this by asserting that if a producer desires a *means* as an *end* in itself, then he is "consuming." In this *formal* sense, as we have seen, consumers' sovereignty, by definition, always obtains. Formally, there is nothing wrong with such a definition, for we have stressed throughout this book that an individual evaluates ends (consumption) on his value scale and that his valuation of means (for production) is dependent upon the former. In this sense, then, consumption always rules production.

But this formal sense is not very useful for analyzing the situation on the *market*. And it is precisely the latter sense that Hutt and others employ. Thus, suppose producer A withholds his labor or land or capital service from the market. For whatever reason, he is exercising his sovereignty over his person and property. On the other hand, if he supplies them to the market, he is, to the extent that he aims at monetary return, submitting himself to the demands of the consumers. In the aforementioned general sense, "consumption" rules in any case. But the critical question is: *which* "consumer"? The market consumer of exchangeable goods who buys these goods with money, or the market producer of exchangeable goods who sells these goods for money? To answer this question, it is necessary to distinguish between the "producer of exchangeable goods" and the "consumer of exchangeable goods," since the market, by definition, can deal only in such goods. In short, we can designate people as "producers" and as "consumers," even though every man must act as a consumer, and every man must also act, in another context, as a producer (or as the receiver of a gift from a producer).

Making this distinction, we find that, contrary to Hutt, each individual has *self-sovereignty* over his person and property on the free market. The producer, and the producer alone, decides whether or not he will keep his property (including his own person) idle or sell it on the market for money, the results of his production then going to the consumers in exchange for their money. This decision—concerning how much to allocate to the market and how much to withhold—is the decision of the individual producer and of him alone.

Hutt implicitly recognizes this, however, since he soon shifts his argument and begins inconsistently to hold up "consumers' sovereignty" as an *ethical ideal against which the activities of the free market are to be judged*. Consumers' sovereignty becomes almost an Absolute Good, and any action by producers to thwart this ideal is considered as little less than moral treason. Wavering between consumers' sovereignty as a *necessary fact* and the contradictory concept of consumers' sovereignty as an *ideal* that can be violated, Hutt attempts to establish various criteria to determine when this sovereignty *is* being violated. For example, he asserts that when a producer withholds his person or property out of a desire to use it for enjoyment *as a consumers' good,* then this is a legitimate act, in keeping with rule by the consumer. On the other hand, when the producer acts to withhold his property in order to attain more monetary income than otherwise (presumably, although Hutt does not state this, by taking advantage of an inelastic demand curve for his product), then he is engaging in a vicious infringement on the consumers' will. He may do so by acting to restrict production of his own personal product, or, if he makes the same product as other producers, by acting in concert with them to restrict production in order to raise the price. This is the doctrine of monopoly price, and it is this monopoly price that is allegedly the instrument by which producers pervert their rightful function.

Hutt recognizes the enormous difficulty of distinguishing among the producer's motives in any concrete case. The individual who withholds his own labor may be doing so in order to obtain leisure; and even the owner of land or capital may be withholding it in order to derive, say, an esthetic enjoyment from the contemplation of his unused property. Suppose, indeed, that there is a *mixture* of motives in both cases. Hutt is definitely inclined to solve these difficulties by *not* giving the producer the benefit of the doubt, particularly in the case of property.

But the difficulty is far greater than Hutt imagines. Every individual producer is always engaged in an attempt to maximize his "psychic income," to arrive at the highest place on his value scale. To do so, he balances on this scale monetary income and various nonmonetary factors, in accordance with his particular valuations. Let us take the producer first as a *seller of labor.* In judging how much of his labor to sell and at what price, the producer will take into consideration the monetary income to be gained, the psychic return from the type of work and the "working conditions," and the leisure forgone, balancing them in accordance with the operation of his various marginal utilities. Certainly, if he can earn a higher income by working less, he will do so, since he also gains leisure thereby. And the question arises: Why is this immoral?

Moreover, (1) it is *impossible,* not simply impracticable, to separate the leisure from monetary considerations here, since both elements are involved, and only the person himself will know the intricate balancing of his own valuations. (2) More important, this act does *not* contravene the truth that the producer can earn money only by serving the consumers. Why has he been able to extract a "monopoly price" through restricting his production? Only because the demand for his services (either directly by consumers or indirectly from them through lower-order producers) is *inelastic,* so that a decreased production of the good and a higher price will lead to increased expenditure on his product and therefore increased income for him. Yet this inelastic demand schedule is purely the result of the *voluntary demands* of the consumers. If the consumers were really angry at this "monopolistic action," they could easily make their demand curves *elastic* by *boycotting* the producer and/or by increasing their demands at the "competitive" production level. The fact that they do not do so signifies their satisfaction with the existing state of affairs and demonstrates that they, as well as the producer, benefit from the resulting voluntary exchanges.

What about the producer in his capacity as a seller of property—the main target of the "anti-monopoly-price" school? The principle, first of all, is virtually the same. Individual producers may restrict the production and sale of their land or capital goods, either individually or in concert (by means of a "cartel") in order to increase their expected monetary incomes from the sale. Once again, there is nothing distinctively immoral about such action. The producers, other things being equal, are attempting to maximize the monetary income from their factors of production. This is no more immoral than any other attempt to maximize monetary income. Furthermore, they can do so only *by serving the consumers,* since, once again, the sale is voluntary on the part of both producers and consumers. Again, such a "monopoly price," to be established either by one individual or by individuals co-operating together in a cartel, is possible only if the demand curve (directly or indirectly of the consumers) is *inelastic,* and this inelasticity *is the resultant of the purely voluntary choices of consumers in their maximization of satisfaction.* For this "inelasticity" is simply a label for a situaion in which consumers spend more money on a good at a higher than at a lower price. If the consumers were really opposed to the cartel action, and if the resulting exchanges really hurt them, they would boycott the "monopolistic" firm or firms, they would lower their purchasing so that the demand curve became *elastic,* and the firm would be forced to increase its production and reduce its price again. If the "monopolistic price" action had been taken by a cartel of firms, and the cartel had no other advantages for rendering production more efficient, it would then have to disband, because of the now demonstrated elasticity of the demand schedule.

But, it may be asked, is it not true that the consumers would *prefer* a lower price and that therefore achievement of a "monopoly price" constitutes a "frustration of consumers' sovereignty"? The answer is: Of course, consumers would prefer lower prices; they always would. In fact, the lower the price, the more they would like it. Does this mean that the ideal price is zero, or close to zero, for all goods, because this would represent the greatest degree of producers' sacrifice to consumers' wishes?

In their role as consumers, men would always like lower prices for their purchases; in their capacity as producers, men always like higher prices for their wares. If Nature had originally provided a material Utopia, then all exchangeable goods would be free for the taking, and there would be no need for any labor to earn a money return. This Utopia would also be "preferred," but it too is a purely imaginary condition. Man must necessarily work within a given *real* environment of inherited land and durable capital.

In *this* world, there are two, and only two, ways to settle what the prices of goods will be. One is the way of the free market, where prices are set voluntarily by each of the participating individuals. In this situation, exchanges are made on terms benefiting all the exchangers. The other way is by violent intervention in the market, the way of hegemony as against contract. Such hegemonic establishment of prices means the outlawing of free exchanges and the institution of exploitation of man by man—for exploitation occurs whenever a coerced exchange is made. If the free market route—the route of mutual benefit—is adopted, then there can be no other criterion of justice than the free market price, and this includes alleged "competitive" and "monopoly" prices, as well as the actions of cartels. In the free market, consumers and producers adjust their actions in voluntary cooperation.

In the case of barter, this conclusion is evident; the various producer-consumers either determine their mutual exchange rates voluntarily in the free market, or else the ratios are set by violence. There seems to be no reason why it should be more or less "moral," on any grounds, for the horse-price of fish to be higher or lower than it is on the free market, or, in other words, why the fish-price of horses should be lower or higher. Yet it is no more evident why any money price should be lower or higher than it is on the market.[4]

2. *Cartels and Their Consequences*

A. CARTELS AND "MONOPOLY PRICE"

But is not monopolizing action a restriction of production, and is not this restriction a demonstrably antisocial act? Let us first take what would seem to be the worst possible case of such action: the actual destruction of part of a product by a cartel. This is done to take advantage of an inelastic demand curve and to raise the price to gain a greater monetary income for the whole group. We can visualize, for example, the case of a coffee cartel burning great quantities of coffee.

In the first place, such actions will surely occur very seldom. Actual destruction of its product is clearly a highly wasteful act, even for the cartel; it is obvious that the factors of production which the growers had expended in producing the coffee have been spent in vain. Clearly, the production of the total quantity of coffee itself has proved to be an error, and the burning of coffee is only the aftermath and reflection of the error. Yet, because of the uncertainty of the future, errors are often made. Man could labor and invest for years in the production of a good which, it may turn out, consumers hardly want at all. If, for example, consumers' tastes had changed so that coffee would not be demanded by anyone, regardless of price, it would again have to be destroyed, with or without a cartel.

Error is certainly unfortunate, but it cannot be considered immoral or antisocial; nobody aims deliberately at error.[5] If coffee were a durable good, it is obvious that the cartel would *not* destroy it, but would store it for gradual future sale to consumers, thus earning income on the "surplus" coffee. In an evenly rotating economy, where errors are barred by definition, there would be no destruction, since optimum stocks for the attainment of money income would be produced in advance. Less coffee would be produced from the beginning. *The waste lies in the excessive production of coffee* at the expense of other goods that could have been produced. *The waste does not lie in the actual burning of the coffee.* After the production of coffee is lowered, the other factors which would have gone into coffee production will not be wasted; the other land, labor, etc., will go into other and more profitable uses. It is true that excess specific factors will remain idle; but this is always the fate of specific factors when the realities of consumer demand do not sustain their use in production. For example, if there is a sudden dwindling of consumer demand for a good, so that it becomes unremunerative for labor to work with certain specialized machines, this "idle capacity" is *not* a social waste, but is rather socially useful. It is proved an error to have produced the machines; and now that the machines *are* produced, working on them turns out to be less profitable than working with other lands and machines to produce some other result. Therefore, the economical step is to leave them idle or perhaps to transform their material stuff into other uses. Of course, in an errorless economy, no excessive specific capital goods will be produced.

Suppose, for example, that before the coffee cartel went into operation, X amount of labor and Y amount of land co-operated to produce 100 million pounds of coffee a year. The coffee cartel determined, however, that the most remunerative production was 60 million pounds and therefore reduced annual output to this level. It would have been absurd, of course, to continue wasteful production of 100 million pounds and then to burn 40 millions. But what of the now surplus labor and land? These shift to the production, say, of 10 million pounds of rubber, 50,000 hours of service as jungle guides, etc. Who is to say that the second structure of production, the second allocation of factors, is less "just" than the first? In fact, we may say it is *more* just, since the new allocation of factors will be more profitable, and hence more *value-productive,* to consumers. In the value sense, then, over-all production has now *expanded,* not contracted. It is clear we cannot say that production, over-all, has been *restricted,* since output of goods other than coffee has increased, and the only comparison between the decline of one good and the increase in another must be made in these broad valuational terms. Indeed, the shifting of factors to rubber and jungle guidance no more *restricts* coffee production than a previous shift of factors to coffee *restricted* the production of the former goods.

The whole concept of "restricting production," then, is a fallacy when applied to the free market. In the real world of scarce resources in relation to possible ends, *all* production involves choice and the allocation of factors to serve the most highly valued ends. In short, the production of *any* product is necessarily always "restricted." Such "restriction" follows simply from the universal scarcity of factors and the diminishing marginal utility of any one product. But then it is absurd to speak of "restriction" at all.[6]

We cannot, then, say that the cartel has "restricted production." After the final allocation has eliminated the producer's error, the cartel's action will effect a maximization of producers' incomes in the service of the consumers, as do all other free-market allocations. This is the result that people on the market tend to attain, in consonance with their skill as forecasting entrepreneurs, and this is the only situation in which man as consumer harmonizes with man as producer.

It follows from our analysis that the producers' original production of 100 million pounds was an unfortunate error, later corrected by them. Instead of being a vicious restriction of production to the detriment of the consumers, the cutback in coffee production was, on the contrary, a correction of the previous error. Since only the free market can allocate resources to serve the consumer, in accordance with monetary profitability, it follows that in the previous situation, "too much" coffee and "too little" rubber, jungle guide service, etc., were being produced. The cartel's action, in reducing the production of coffee and causing an increase in the production of rubber, jungle guiding, etc., led to an *increase* in the power of the productive resources to satisfy consumer desires.

If there are anticartelists who disagree with this verdict and believe that the *previous* structure of production served the consumers better, they are always at perfect liberty to bid the land, labor, and capital factors away from the jungle-guide agencies and rubber producers, *and themselves* embark on the production of the allegedly "deficient" 40 million pounds of coffee. Since *they* are not doing so, they are hardly in a position to attack the *existing* coffee producers for not doing so. As Mises succinctly stated: "Certainly those engaged in the production of steel are not responsible for the fact that other people did not likewise enter this field of production. . . . If somebody is to blame for the fact that the number of people who joined the voluntary civil defense organization is not larger, then it is not those who have already joined but those who have not." [7] The position of the anticartelists implies that someone else is producing *too much* of some *other* product; yet they offer no standards except their own arbitrary decrees to determine *which* production is excessive.

Criticism of steel owners for not producing "enough" steel or of coffee growers for not producing "enough" coffee also implies the existence of a caste system, whereby a certain caste is permanently designated to produce steel, another caste to grow coffee, etc. Only in such a caste society would such criticism make sense. Yet the free market is the reverse of the caste system; indeed, choice between alternatives implies mobility between alternatives, and this mobility obviously holds for entrepreneurs or lenders with money to invest in production.

Furthermore, as we have stated above, an inelastic demand curve is purely the result of consumers' choice. Thus, suppose that 100 million pounds of coffee have been produced and lie in stock, and a group of growers jointly decide that a burning of 40 million pounds of coffee will, say, double the price from 1 gold grain per pound to 2 gold grains per pound, thus giving them a higher total income acting jointly. This would be impossible if the growers knew that they would be confronted with an effective consumer boycott at the higher price. Further, consumers have another way, *if they so desire,* to prevent destruction of the good. Various consumers, acting either individually or jointly, could offer to purchase the existing coffee *at higher than present prices.* They could do this either because of their desire for coffee or because of their philanthropic dismay at the destruction of a useful good, or from a combination of both motives. At any rate, if they did so, they would prevent the producers' cartel from decreasing the supply sold on the market. The boycott at a higher price and/or increased offers at the lower price would change the demand curve and render it elastic at the present stock level, thereby removing any incentive or need for the formation of a cartel.

To regard a cartel as immoral or as hampering some sort of consumers' sovereignty is therefore completely unwarranted. And this is true even in the seemingly "worst" case of a cartel that we may assume is founded *solely* for "restrictive" purposes, and where, as a result of previous error and the perishability of product, actual destruction will occur. If consumers really wish to prevent this action, they need only change their demand schedules for the product, either by an actual change in their taste for coffee or by a combination of boycott and philanthropy. The fact that such a development does not take place in any given circumstance signifies that the producers are still maximizing their monetary income in the service of the consumers—by a cartel action, as well as by any other action. Some readers might object that, in offering higher demands for existing stock, the consumers would be bribing the producers, and that this constitutes an unwarranted extortion on the part of the producers. But this charge is untenable. Producers are guided by the goal of maximizing monetary income; they are not extorting, but simply producing where their gains are at a maximum, through exchanges concluded voluntarily by producers and consumers alike. This is no more nor less a case of "extortion" than when a laborer shifts from a lower-paying to a higher-paying job or when an entrepreneur invests in what he thinks will be a more rather than a less profitable project.

It must be recognized that once an error has been committed, as it had been in the aforementioned situation, the rational course is not to bewail the past, nor to attempt to "recover" historical costs, but to make the best (*ceteris paribus,* the most money) of the present situation. We recognize this when previously produced machines or other capital goods face a loss of demand for their product. In the production process, as we have seen, labor energies work on natural and produced factors to arrive at the most urgently demanded consumers' goods. Since error is inevitable, this process is bound to lead to a considerable amount of "idle" capital goods at any given time. Similarly, much original land area will remain idle because existing labor has more profitable work to do on other lands. In short, the "idle" coffee is the result of an error in forecasting and should be no more shocking or reprehensible than "idle capacity" in any other type of capital good.

Our argument is just as applicable to a single firm producing a unique product with an inelastic demand as it is to a cartel of firms. A single firm, with inelastic demand for its product, could also destroy part of its stock after committing a forecasting error. Our critique of the "anti-monopoly-price" and consumers'-sovereignty doctrines applies equally well to such a case.

B. CARTELS, MERGERS, AND CORPORATIONS

A common argument holds that cartel action involves *collusion.* For one firm may achieve a "monopoly price" as a result of its natural abilities or consumer enthusiasm for its particular product, whereas a cartel of many firms allegedly involves "collusion" and "conspiracy." These expressions, however, are simply emotive terms designed to induce an unfavorable response. What is actually involved here is *co-operation* to increase the incomes of the producers. For what is the essence of a cartel action? Individual producers agree to pool their assets into a common lot, this single central organization to make the decisions on production and price policies for all the owners and then to allocate the monetary gain among them. *But is this process not the same as any sort of joint partnership or the formation of a single corporation?* What happens when a partnership or corporation is formed? Individuals agree to pool their assets into a central management, this central direction to set the policies for the owners and to allocate the monetary gains among them. In both cases, the pooling, lines of authority, and allocation of monetary gain take place according to rules agreed upon by all from the beginning. *There is therefore no essential difference between a cartel and an ordinary corporation or partnership.* It might be objected that the ordinary corporation or partnership covers only *one* firm, while the cartel includes an entire "industry" (i.e., all firms producing a certain product). But such a distinction does not necessarily hold. Various firms may refuse to enter a cartel, while, on the other hand, a single firm may well be a "monopolist" in the sale of its particular unique product, and therefore it may also encompass an entire "industry."

The correspondence between a co-operative partnership or corporation—not generally considered reprehensible—and a cartel is further enhanced when we consider the case of a *merger* of various firms. Mergers have been denounced as "monopolistic," but not nearly as vehemently as have cartels. Merging firms pool their capital assets, and the owners of the individual firms now become part owners of the single merged firm. They will agree on rules for the exchange ratios of the shares of the different companies. If the merging firms encompass the entire industry, then a merger is simply a permanent form of cartel. Yet clearly the only difference between a merger and the *original forming of a single corporation* is that the merger pools existing capital-goods assets, while the original birth of a corporation pools *money* assets. It is clear that, economically, there is little difference between the two. A merger is the action of individuals with a certain quantity of already produced capital goods, adjusting themselves to their present and expected future conditions by co-operative pooling of assets. The formation of a new company is an adjustment to expected future conditions (before any specific investment has been made in capital goods) by co-operative pooling of assets. The essential similarity lies in the voluntary pooling of assets in a more centralized organization for the purpose of increasing monetary income.

The theorists who attack cartels and monopolies do not recognize the identity of the two actions. As a result, a merger is considered less reprehensible than a cartel, and a single corporation far less menacing than a merger. Yet an industry-wide merger is, in effect, a permanent cartel, a permanent combination and fusion. On the other hand, a cartel that maintains by voluntary agreement the separate identity of each firm is by nature a highly transitory and ephemeral arrangement and, as we shall see below, generally tends to break up on the market. In fact, in many cases, a cartel can be considered as simply a tentative step in the direction of permanent merger. And a merger and the original formation of a corporation do not, as we have seen, essentially differ. The former is an adaptation of the size and number of firms in an industry to new conditions or is the correction of a previous error in forecasting. The latter is a *de novo* attempt to adapt to present and future market conditions.

C. ECONOMICS, TECHNOLOGY, AND THE SIZE OF THE FIRM

We do not know, and economics cannot tell us, the optimum size of a firm in any given industry. The optimum size depends on the concrete technological conditions of each situation, as well as on the state of consumer demand in relation to the given supply of various factors in this and in other industries. All these complex questions enter into the decisions of producers, and ultimately of consumers, concerning how large the firms in various lines of production will be. In line with consumer demand and with opportunity costs for the various factors, factor-owners and entrepreneurs will produce in those industries and firms in which they can maximize their monetary income or profit (other psychic factors being equal). Since forecasting is the function of entrepreneurs, successful entrepreneurs will minimize their errors and hence their losses as well. As a result, *any existing situation on the free market will tend to be the most desirable for the satisfaction of consumers' demands (including herein the nonmonetary wishes of the producers).*

Neither economists nor engineers can decide the most efficient size of a firm in any situation. Only the entrepreneurs themselves can determine what size of firm will operate most efficiently, and it is presumptuous and unwarranted for economists or for any other outside observers to attempt to dictate otherwise. In this and other matters, the wishes and demands of the consumers are "telegraphed" through the price system, and the resulting drive for maximum monetary income and profits will always tend to bring about the optimum allocation and pricing. There is no need for the external advice of economists.

It is clear that when several thousand individuals decide *not* to produce and own individual steel plants by themselves, but rather to pool their capital into an organized corporation—which will purchase factors, invest and direct production, and sell the product, later allocating the monetary gains among the owners—they are enormously increasing their efficiency. Compared to production in hundreds of tiny plants, the quantity of production per given factors will be greatly increased. The large firm will be able to purchase heavily capitalized machinery and to finance better organized marketing and distributing outlets. All this is quite clear when thousands of individuals pool their capital into the establishment of a steel firm. But why may it not be equally true when *several small steel firms merge into one large company?*

It might be replied that in the latter merger, particularly in the case of a cartel, joint action is taken, not to increase efficiency, but solely to increase income by restricting sales. Yet there is no way that an outside observer can distinguish between a "restrictive" and an efficiency-increasing operation. In the first place, we must not think of the plant or factory as being the only productive factors the efficiency of which can increase. Marketing, advertising, etc., are also *factors of production;* for "production" is not simply the physical transformation of a product, but also consists in transporting it and placing it into the hands of users. The latter implies the expenses of informing the user about the existence and nature of the product and of selling that product to him. Since a cartel always engages in joint marketing, who can deny that the cartel might render marketing more efficient? How, therefore, can this efficiency be separated from the "restrictive" aspect of the operation? [8]

Furthermore, technological factors in production can never be considered in a vacuum. Technological knowledge tells us of a whole host of alternatives that are open to us. But the crucial questions—in what to invest? how much? what production method to choose?—can be answered only by economic, i.e., by *financial* considerations. They can be answered only on a market actuated by a drive for money incomes and profits. Thus, how is a producer to decide, in digging a subway tunnel, what material to use in its construction? From a purely technological point of view, solid platinum may be the best choice, the most durable, etc. Does this mean that he should choose platinum? He can make a choice among factors, methods, goods to produce, etc., only by comparing the necessary monetary expenses (which are equal to the income the factors could earn elsewhere) with expected monetary income from the production. Only by maximizing monetary gain can factors be allocated in the service of consumers; otherwise, and on purely technological grounds, there would be nothing to prevent the building of platinum-lined subway tunnels the breadth of the continent. The only reason this cannot be done under present conditions is the heavy money "cost" caused by the waste of drawing away factors and resources from uses far more urgently demanded by the consumers. But the fact of this urgent alternative demand—and thus *the fact of the waste*—can be discovered only through being recorded by a price system actuated by a drive by producers for money incomes. Only empirical observation of the market reveals to us the full absurdity of such a transcontinental subway.

Moreover, there are no physical units with which we can compare the different types of physical factors and physical products. Thus, suppose a producer attempts to determine the most efficient use of two hours of his labor. In a romantic moment, he tries to determine this efficiency by purely abstracting from "sordid" considerations of monetary gain. Assume that he is confronted with three technologically known alternatives. These are tabulated as follows:

Factors		*Product*
A		
2 hours of labor 5 pounds of clay 1 oven-hour	:	1 pot
B		
2 hours of labor 1 block of wood 1 oven-hour	:	1 pipe
C		
2 hours of labor 1 block of wood 1 oven-hour	:	1 model boat

Which of these alternatives, *A, B,* or *C,* is the most efficient, the most technologically "useful," way of allocating his labor? It is clear that the "idealistic," self-sacrificing producer has no way of knowing! He has no rational way of deciding whether or not to produce the pot, the pipe, or the boat. Only the "selfish" money-seeking producer has a rational way of determining the allocation. In seeking maximum monetary gain, the producer compares the money costs (necessary expenses) of the various factors with the prices of the products. Considering *A* and *B*, for example, if the purchase of the clay and oven-hour would cost 1 gold ounce, and the pot could sell for 2 gold ounces, his labor would earn 1 gold ounce. On the other hand, if the wood and oven-hour would cost 1½ gold ounces, and the pipe could sell for 4 gold ounces, he would earn 2½ ounces for his two hours of labor and would choose to make this product. The prices of both the product and the factors are reflections of consumer demand and of producers' attempts to earn money in its service. The only way the producer could determine which product to make is to compare expected monetary gains. If the boat would sell for 5 gold ounces, he would produce the boat rather than the pipe, and thus satisfy a more urgent consumer demand, as well as his own desire for monetary income.

There can therefore be no separation of technological efficiency from financial considerations. The only way that we can determine whether one product is more demanded than another, or one process more efficient than another, is through concrete actions of the free market. We may think it self-evident, for example, that the optimum efficient size of a steel plant is larger than that of a barber shop. But we know this not as economists from a priori or praxeological reasoning, but purely by empirical observation of the free market. There is no way that economists or any other outside observers can set the technological optimum for any plant or firm. This can be done only on the market itself. But if this is true in general, it is also true in the specific cases of mergers and cartels. The impossibility of isolating a technological element becomes even clearer when we remember that the critical problem is not the size of the *plant,* but the size of the *firm.* The two are by no means synonymous. It is true that the firm will consider the optimum-sized plant for whatever scale its operations will be on, and, further, that a larger-sized plant will, *ceteris paribus,* require a larger-sized firm. But its range of decisions cover a much broader ground: how much to invest, what good or goods to produce, etc. A firm may encompass one or more plants or products and always encompasses marketing facilities, financial organization, etc., which are overlooked when only the plant is held in view.[9]

These considerations, incidentally, serve to refute the very popular distinction between "production for use" and "production for profit." In the first place, *all* production is for use; otherwise it would not take place. In the market economy, this almost always means goods for the use of *others*—the consumers. Profit can be earned only through servicing consumers with produced goods. On the other hand, there can be no rational production, above the most primitive level, based on technological or utilitarian considerations abstracted from monetary gain.[10]

It is important to realize what we have *not* said in this section. We have not said that cartels will always be more efficient than individual firms or that "big" firms will always be more efficient than small ones. Our conclusion is that economics can make few valid statements about the optimal size of a firm *except* that the free market will come as close as possible to rendering maximum service to consumers, whether we are considering the size of a firm or any other aspect of production. All the concrete problems in production—the size of the firm, the size of the industry, the location, price, size and nature of the output, etc.—are for entrepreneurs, not economists, to solve.

We should not leave the problem of the size of the firm without considering a common worry of economic writers: What if the average cost curve of a firm continues to fall indefinitely? Would not the firm then grow so big as to constitute a "monopoly"? There is much lamentation that competition "breaks down" in such a situation. Much of the emphasis on this problem comes, however, from preoccupation with the case of "pure competition," which, as we shall see below, is an impossible figment. Secondly, it is obvious that no firm ever has been or can be infinitely large, so that limiting obstacles—rising or less rapidly falling costs—must enter somewhere, and relevantly, for every firm.[11] Thirdly, if a firm, through greater efficiency, does obtain a "monopoly" in some sense in its industry, it clearly does so, in the case we are considering (falling average cost), by lowering prices and benefiting the consumers. And if (as all the theorists who attack "monopoly" agree) what is wrong with "monopoly" is precisely a *restriction* of production and a *rise* in price, there is obviously nothing wrong with a "monopoly" achieved by pursuing the directly opposite path.[12]

D. THE INSTABILITY OF THE CARTEL

Analysis demonstrates that a cartel is an inherently unstable form of operation. If the joint pooling of assets in a common cause proves in the long run to be profitable for each of the individual members of the cartel, then they will act formally to *merge* into one large firm. The cartel then disappears in the merger. On the other hand, if the joint action proves unprofitable for one or more members, the dissatisfied firm or firms will break away from the cartel, and, as we shall see, any such independent action almost always destroys the cartel. The cartel form, therefore, is bound to be highly evanescent and unstable.

If joint action is the most efficient and profitable course for each member, a merger will soon take place. The very fact that each member firm retains its potential independence in the cartel means that a breakup could take place at any time. The cartel will have to assign production totals and quotas to each of the member firms. This is likely to lead first to a good deal of bickering among the firms over the assignment of quotas, with each member attempting to gain a larger share of the assignment. Whatever basis quotas are assigned on will necessarily be arbitrary and will always be subject to challenge by one or more members.[13] In a merger, or in the formation of one corporation, the stockholders, by majority vote, form a decision-making organization. In the case of a cartel, however, disputes arise among *independent* owning entities.

Particularly likely to be restive under the imposed joint action will be the more efficient producers, who will be eager to expand their business rather than be fettered by shackles and quotas to provide shelter for their less efficient competitors. Clearly, the more efficient firms will be the ones to break up the cartel. This will be increasingly true as time goes on and conditions change from the time the cartel was first formed. The quotas, the jealously made agreements that formerly seemed plausible to all, now become intolerable restrictions for the more efficient firms, and the cartel soon breaks up; for once one firm breaks away, expands output and cuts prices, the others must follow.

If the cartel does not break up from within, it is even more likely to do so from without. To the extent that it has earned unusual monopoly profits, outside firms and outside producers will enter the same field of production. Outsiders, in short, rush in to take advantage of the higher profits. But once one strong competitor arises to challenge it, the cartel is doomed. For as the firms in the cartel are bound by production quotas, they must watch new competitors expand and take away sales from them at an accelerating rate. As a result, the cartel must break up under the pressure of the newcomers' competition.[14]

E. FREE COMPETITION AND CARTELS

There are other arguments that opponents of cartels use in decrying cartel action. One thesis asserts that there is something wicked about formerly competing firms now uniting, e.g., "restricting competition" or "restraining trade." Such restriction is supposed to injure the consumers' freedom of choice. As Hutt phrased it in his previously cited article: "Consumers are free . . . and consumers' sovereignty is realizable, only to the extent to which the power of substitution exists."

But surely this is a complete misconception of the meaning of freedom. Crusoe and Friday bargaining on a desert island have very little *range* or *power* of choice; their power of substitution is limited. Yet if neither man interferes with the other's person or property, each one is absolutely *free*. To argue otherwise is to adopt the fallacy of confusing freedom with abundance or range of choice. *No individual producer is or can be responsible for other people's power to substitute.* No coffee grower or steel producer, whether acting singly or jointly, is responsible to anyone because he chose not to produce more. If Professor X or consumer Y believes that there are not enough coffee producers in existence or that they are not producing enough, these critics are free to enter the coffee or steel business as they see fit, thus increasing both the number of competitors and the quantity of the good produced.

If consumer demand had really justified more competitors or more of the product or a greater variety of products, then entrepreneurs would have seized the opportunity to profit by satisfying this demand. The fact that this is not being done in any given case demonstrates that no such unsatisfied consumer demand exists. But if this is true, then it follows that *no man-made actions can improve the satisfaction of consumer demand more than is being done on the unhampered market.* The false confusion of freedom with abundance rests on a failure to distinguish between the *conditions given by nature* and *man-made actions to transform nature.* In a state of raw nature, there is no abundance; in fact, there are few, if any, goods at all. Crusoe is *absolutely free,* and yet on the point of starvation. Of course, it would be pleasanter for everyone if the nature-given conditions had been far more abundant, but these are vain fantasies. For vis à vis nature, this *is* the best of all *possible* worlds, because it is the *only* possible one. Man's condition on earth is that he must work with the given natural conditions and improve them by human action. *It is a reflection on nature, not on the free market, that everyone is "free to starve."*

Economics demonstrates that individuals, entering into mutual relations in a free market in a free society—and *only* in such relations—can provide abundance for themselves and for the entire society. ("Free," as always in this book, is used in the interpersonal sense of being unmolested by other persons.) To employ freedom as itself equivalent to abundance obstructs understanding of these truths.

The free market in the world of production may be termed "free competition" or "free entry," meaning that in a free society anyone is free to compete and produce in any field he chooses. "Free competition" is the application of liberty to the sphere of production: the freedom to buy, sell, and transform one's property without violent interference by an external power.

We have seen above that in a regime of free competition consumers' satisfaction will, at any time, tend to be at the maximum possible, given natural conditions. The best forecasters will tend to emerge as the dominant entrepreneurs, and if anyone sees an opportunity passed up, he is free to take advantage of his superior foresight. The regime that tends to maximize consumers' satisfaction, therefore, is not "pure competition" or "perfect competition" or "competition without cartel action,"[15] or anything other than one of simple *economic liberty.*

Some critics charge that there is no "real" free entry or free competition in a free market. For how can anyone compete or enter a field when an enormous amount of money is needed to invest in efficient plants and firms? It is easy to "enter" the pushcart peddling "industry" because so little capital is required, but it is almost impossible to establish a new automobile firm, with its heavy requirements of capital.

This argument is but another variant of the prevailing confusion between freedom and abundance. In this case, the abundance refers to the money capital which a man has been able to amass. Every man is perfectly free to become a baseball player; but this freedom does not imply that he will be as good a baseball player as the next man. A man's range or power of action, dependent on his ability and the exchange-value of his property, is something completely distinct from his freedom. As we have said, a free society will in the long run lead to general abundance and is the necessary condition for that abundance. But the two must be kept conceptually distinct, and not confused by phrases such as "real freedom" or "true freedom." Therefore, the fact that everyone is *free* to enter an industry does not mean that everyone is *able,* either in terms of personal qualities or monetary capital, to do so. In industries requiring more capital, fewer people will be able to take advantage of their freedom to set up a new firm than in those requiring less capital, just as fewer laborers will be able to take advantage of freedom of entry in a very highly skilled profession than in a menial position. There is no mystery about either situation.

In fact, the disability is much more relevant in the case of labor than in the case of business competition. What are modern devices such as corporations but means of pooling capital by many people of greater and lesser wealth? The "difficulty" of investing in a new automobile firm should be considered, not in terms of the hundreds of millions of dollars required for total investment, but in terms of the fifty or so dollars required to purchase one share of stock. But while capital can be pooled, beginning with the smallest units, labor ability cannot be pooled.

Sometimes the argument reaches absurd lengths. For example, it is often asserted that now, in this modern world, firms are so large that new people "cannot" compete or enter the industry because the capital cannot be raised. These critics do not seem to see that the aggregate capital and wealth of individuals have advanced along with the increase in wealth required to launch a new enterprise. In fact, these are two sides of the same coin. There is no reason to suppose that it was easier to raise the capital to launch a new retail shop many centuries ago than it is to raise capital for the automobile firm today. If there is enough capital to finance the large firms currently existing, there is enough to finance one more; in fact, capital could be withdrawn from existing large firms and shifted to new ones if there is a need for them. Of course, if the new enterprise would be unprofitable and therefore unserviceable to consumers, it is easy to see why there is reluctance in the free market to embark on the venture.

That there is inequality of ability or monetary income on the free market should surprise no one. As we have seen above, men are not "equal" in their tastes, interests, abilities, or locations. Resources are not distributed "equally" over the earth.[16] This inequality or diversity in abilities and distribution of resources insures inequality of income on the free market. And, since a man's monetary assets are derived from his and his ancestors' abilities in serving consumers on the market, it is not surprising that there is inequality of monetary *wealth* as well.

The term "free competition," then, will prove misleading unless it is interpreted to mean free action, i.e., freedom to compete or not to compete as the individual wills.

It should be clear from the foregoing discussion that there is nothing particularly reprehensible or destructive of consumer freedom in the establishment of a "monopoly price" or in a cartel action. A cartel action, if it is a voluntary one, cannot injure freedom of competition and, if it proves profitable, *benefits* rather than injures the consumers. It is perfectly consonant with a free society, with individual self-sovereignty, and with the earning of money through serving consumers.

As Benjamin R. Tucker brilliantly concluded in dealing with the problem of cartels and competition:

> The right to cooperate is as unquestionable as the right to compete; the right to compete involves the right to refrain from competition; cooperation is often a method of competition, and competition is always, in the larger view, a method of cooperation . . . each is a legitimate, orderly, non-invasive exercise of the individual will under the social law of equal liberty . . .
>
> Viewed in the light of these irrefutable propositions, the trust, then, like every other industrial combination endeavoring to do collectively nothing but what each member of the combination might fully endeavor to do individually, is, *per se,* an unimpeachable institution. To assail or control or deny this form of cooperation on the ground that it is itself a denial of competition is an absurdity. It is an absurdity because it proves too much. *The trust is a denial of competition in no other sense than that in which competition itself is a denial of competition.* (Italics ours.) The trust denies competition only by producing and selling more cheaply than those outside of the trust can produce and sell; but in that sense every successful individual competitor also denies competition . . . The fact is that there is one denial of competition which is the right of all, and that there is another denial of competition which is the right of none. All of us, whether out of a trust or in it, have a right to deny competition by competing, but none of us, whether in a trust or out of it, have a right to deny competition by arbitrary decree, by interference with voluntary effort, by forcible suppression of initiative.[17]

This is not to say, of course, that joint co-operation or combination is necessarily "better than" competition among firms. We simply conclude that the relative extent of areas *within* or *between* firms on the free market will be precisely that proportion most conducive to the well-being of consumers and producers alike. This is the same as our previous conclusion that the size of a firm will tend to be established at the level most serviceable to the consumers.[18]

F. THE PROBLEM OF ONE BIG CARTEL

The myth of the evil cartel has been greatly bolstered by the nightmare image of "one big cartel." "This is all very well," one may say, "but suppose that all the firms in the country amalgamated or cartelized into One Big Cartel. What of the horrors then?"

The answer can be obtained by referring to chapter 9, pp. 547 ff. above, where we saw that the free market placed definite limits on the size of the firm, i.e., the limits of *calculability* on the market. In order to calculate the profits and losses of each branch, a firm must be able to refer its internal operations to *external markets* for *each* of the various factors and intermediate products. When any of these external markets disappears, because all are absorbed *within* the province of a single firm, calculability disappears, and there is no way for the firm rationally to allocate factors to that specific area. The more these limits are encroached upon, the greater and greater will be the sphere of irrationality, and the more difficult it will be to avoid losses. One big cartel would not be able rationally to allocate producers' goods at all and hence could not avoid severe losses. Consequently, it could never really be established, and, if tried, would quickly break asunder.

In the production sphere, socialism is equivalent to One Big Cartel, compulsorily organized and controlled by the State.[19] Those who advocate socialist "central planning" as the more efficient method of production for consumer wants must answer the question: If this central planning is really more efficient, why has it not been established by profit-seeking individuals on the free market? The fact that One Big Cartel has never been formed voluntarily and that it needs the coercive might of the State to be formed demonstrates that it could not possibly be the most efficient method of satisfying consumer desires.[20]

Let us assume for a moment that One Big Cartel could be established on the free market and that the calculability problem does not arise. What would the economic consequences be? Would the cartel be able to "exploit" anyone? In the first place, *consumers* could not be "exploited." For consumers' demand curves would still be elastic or inelastic, as the case may be. Since, as we shall see further below, consumers' demand curves for a firm are always elastic above the free-market equilibrium price, it follows that the cartel will not be able to raise prices or earn more from consumers.

What about the factors? Could not *their* owners be exploited by the cartel? In the first place, the universal cartel, to be effective, would have to include owners of primary land; otherwise whatever gains they might have might be imputed to land. To put it in its strongest terms, then, could a universal cartel of all land *and* capital goods "exploit" laborers by systematically paying the latter less than their discounted marginal value products? Could not the members of the cartel agree to pay a very low sum to these workers? If that happened, however, there would be created great opportunities for entrepreneurs either to spring up outside the cartel or to break away from the cartel and profit by hiring workers for a higher wage. This competition would have the double effect of (*a*) breaking up the universal cartel and (*b*) tending again to yield to the laborers their marginal product. As long as competition is free, unhampered by governmental restrictions, no universal cartel could either exploit labor or remain universal for any length of time.[21]

3. *The Illusion of Monopoly Price*

So far we have established that there is nothing "wrong" with a monopoly price, either when instituted by one firm or by a cartel; that, in fact, whatever price the free market (unhampered by violence or the threat of violence) establishes will be the "best" price. We have also shown the impossibility of separating "monopolizing" from efficiency considerations in cartel actions or of separating technology from profitability in general; and we have seen the great instability of the cartel form.

In this section we investigate a further problem: Granted that there is nothing "wrong" with monopoly prices, how tenable is the very concept of "monopoly price" on the free market? Can it be distinguished at all from "competitive price," its supposed polar opposite? To answer this question, we must explore what the theory of monopoly price is all about.

A. DEFINITIONS OF MONOPOLY

Before investigating the theory of monopoly price, we must begin by defining *monopoly*. Despite the fact that monopoly problems occupy an enormous quantity of economic writings, little or no clarity of definition exists.[22] There is, in fact, enormous vagueness and confusion on the subject. Very few economists have formulated a coherent, meaningful definition of monopoly.

A common example of a confused definition is: "Monopoly exists when a firm has control over its price." This definition is a mixture of confusion and absurdity. In the first place, on the free market there is no such thing as "control" over the price in an exchange; in any exchange the price of the sale is *voluntarily* agreed upon by both parties. No "control" is exercised by either party; the only control is each person's control over *his own* actions—stemming from his self-sovereignty—and consequently his control will be over his own decision to enter or not to enter into an exchange at any hypothetical price. There is no direct control over price because price is a *mutual* phenomenon. On the other hand, each person has *absolute* control over his own action and therefore over the price which he will *attempt* to charge for any particular good. Any man can set any price that he wants for any quantity of a good that he sells; the question is whether he can find any buyers at that price. Similarly, of course, any buyer can set any price at which he will purchase a certain good; the question is whether he can find a seller at that price. It is this process, indeed, of mutual bids and offers that yields the daily prices on the market.

There is an all-too-common assumption, however, that if we compare, say, Henry Ford and a small wheat farmer, the two differ enormously in their respective powers of control. It is believed that the wheat farmer finds his price "given" to him by the market, while Ford can "administer" or "set his own" price. The wheat farmer is allegedly subject to the impersonal forces of the market, and ultimately to the consumer, while Ford is, to a greater or lesser extent, the master of his own fate, if not indeed the ruler of the consumers. Further, it is believed that Ford's "monopoly power" stems from his being "large" in relation to the automobile market, while the farmer is a "pure competitor" because he is "small" compared to the total supply of wheat. Usually, Ford is not considered an "absolute" monopolist, but someone with a vague "degree of monopoly power."

In the first place, it is completely false to say that the farmer and Ford differ in their control over price. Both have exactly the same degree of control and of noncontrol: i.e., both have absolute *control* over the quantity they produce and the price which they attempt to get; [23] and absolute *noncontrol* over the price-and-quantity transaction that finally takes place. The farmer is free to ask any price he wants, just as Ford is, and is free to look for a buyer at such a price. He is not in the least compelled to sell his produce to the organized "markets" if he can do better elsewhere. Every producer of every product is free, in a free-market society, to produce as much as he wants of whatever he possesses or can purchase and to try to sell it, at whatever price he can get, to anyone he can find.[24] Naturally, every seller, as we have repeatedly stated, will attempt to sell his produce for the highest possible price; similarly, every buyer will attempt to purchase goods at the lowest possible price. It is precisely the voluntary interaction of these buyers and sellers that establishes the entire supply and demand structure for consumers' and producers' goods. To accuse Ford or a waterworks or any other producer of "charging whatever the traffic will bear" and to take this as a sign of monopoly is pure nonsense, for this is precisely the action of everyone in the economy: the small wheat farmer, the laborer, the landowner, etc. "Charging whatever the traffic will bear" is simply a rather emotive synonym for charging as high a price as can be freely obtained.

Who officially "sets" the price in any exchange is a completely trivial and irrelevant technological question—a matter of institutional convenience rather than economic analysis. The fact that Macy's posts its prices each day does not mean that Macy's has some sort of mysterious "control" of its price over the consumer;[25] similarly, that large-scale industrial buyers of raw materials often post their bid prices does not mean that they exercise some sort of extra control over the price obtained by the growers. Rather than acting as a means of control, in fact, posting simply furnishes needed information to all would-be buyers and/or sellers. The process of price determination through the interaction of value scales occurs in precisely the same way regardless of the concrete details and institutional conditions of market arrangements.[26]

Each individual producer, then, is sovereign over his own actions; he is free to buy, produce, and sell whatever he likes and to whoever will purchase. The farmer is not compelled to sell to any particular market or to any particular company, any more than Ford is compelled to sell to John Brown if he does not wish to do so (say, because he can get a higher price elsewhere). But, as we have seen, in so far as a producer wishes to maximize his monetary return, he does submit himself to the control of consumers, and he sets his output accordingly. This is true of the farmer, of Ford, or of anyone else in the entire economy—landowner, laborer, service-producer, product-owner, etc. Ford, then, has no more "control" over the consumer than the farmer has.

One common objection is that Ford is able to acquire "monopoly power" or "monopolistic power" because his product has a recognized brand name or trade-mark, which the wheat farmer has not. This, however, is surely a case of putting the cart before the horse. The brand name and the wide knowledge of the brand come from consumers' desire for the product attached to that particular brand and are therefore a *result* of consumer demand rather than a pre-existing means for some sort of "monopolistic power" over the consumers. In fact, farmer Hiram Jones is perfectly free to stamp the brand name "Hiram Jones Wheat" on his product and attempt to sell it on the market. The fact that he has not done so signifies that it would not be a profitable step in the concrete market condition of his product. The chief point is that in some cases consumers and lower-order entrepreneurs consider each individual brand name as representing a *unique* product, while in other cases purchasers consider the output of one firm—one product-owner or set of product-owners operating jointly—as identical in use-value with products of other firms. Which situation will occur is entirely dependent on the buyers' valuations in each concrete case.

Later in this chapter we shall analyze in greater detail the tangled web of fallacies involved in the various theories of "monopolistic competition"; at this point we are attempting to arrive at a definition of monopoly *per se*. To proceed: There are three possible coherent definitions of monopoly. One is derived from its linguistic roots: *monos* (only) and *polein* (to sell) i.e., *the only seller of any given good* (definition 1). This is certainly a legitimate definition, but it is an extraordinarily broad one. It means that, whenever there is any differentiation at all among individual products, the individual producer and seller is a "monopolist." John Jones, lawyer, is a "monopolist" over the legal services of John Jones; Tom Williams, doctor, is a "monopolist" over his own unique medical services, etc. The owner of the Empire State Building is a "monopolist" over the rental services in his building. This definition, therefore, labels all consumer distinctions between individual products as establishing "monopolies."

It must be remembered that only *consumers* can decide whether two commodities offered on the market are one good or two different goods. This issue cannot be settled by a physical inspection of the product. The elemental physical nature of the good may be only *one* of its properties; in most cases, a brand name, the "good will" of a particular company, or a more pleasant atmosphere in the store will differentiate the product from its rivals in the view of many of its customers. The products then become *different goods* for the consumers. No one can ever be certain in advance—least of all the economist—whether a commodity sold by A will be treated on the market as homogeneous with the same basic physical good sold by B.[27,28]

Hence, there is hardly any way that definition 1 of "monopoly" can be successfully used. For this definition depends on how we choose a "homogeneous good," and this can never be decided by an economist. What constitutes a "homogeneous commodity" (i.e., an industry)—neckties, bow ties, bow ties with polka dots, etc., or bow ties made by Jones? Only consumers will decide, and they, as different consumers, will be likely to decide differently in each concrete case. Use of definition 1, therefore, will probably reduce to the barren definition of monopoly as *each man's exclusive ownership of his own property*—and this, absurdly, would make every single person a monopolist! [29]

Definition 1, then, is coherent, but highly inexpedient. Its usefulness is very limited, and the term has acquired highly charged emotional connotations from past use of quite different definitions. For reasons detailed below, the term "monopoly" has sinister and evil connotations to most people. "Monopolist" is generally a word of abuse; to apply the term "monopolist" to at least the vast majority of the population and perhaps to every man would have a confusing and even ludicrous effect.

The second definition is related to the first, but differs very significantly. It, in fact, was the *original* definition of monopoly and the very definition responsible for its sinister connotations in the public mind. Let us turn to its classic expression by the great seventeenth-century jurist, Lord Coke:

> A monopoly is an institution or allowance by the king, by his grant, commission, or otherwise . . . to any person or persons, bodies politic or corporate, for the *sole* buying, selling, making, working, or using of anything, whereby any person or persons, bodies politic or corporate, are sought to be restrained of any freedom or liberty that they had before, or hindered in their lawful trade.[30]

In other words, by this definition, *monopoly* is a *grant of special privilege by the State, reserving a certain area of production to one particular individual or group*. Entry into the field is prohibited to others and this prohibition is enforced by the gendarmes of the State.

This definition of monopoly goes back to the common law and acquired great political importance in England during the sixteenth and seventeenth centuries, when an historic struggle took place between libertarians and the Crown over the issue of monopoly as opposed to freedom of production and enterprise. Under this definition of the term, it is not surprising that "monopoly" took on connotations of sinister interest and tyranny in the public mind. The enormous restrictions on production and trade, as well as the establishment by the State of a monopoly caste of favorites, were the objects of vehement attack for several centuries.[31]

That this definition was formerly important in economic analysis is clear in the following quotation from one of the first American economists, Francis Wayland:

> A monopoly is an exclusive right granted to a man, or to a monopoly of men, to employ their labor or capital in some particular manner.[32]

It is obvious that this type of monopoly can *never* arise on a free market, unhampered by State interference. In the free economy, then, according to this definition, there can be *no* "monopoly problem." [33] Many writers have objected that brand names and trade-marks, generally considered as part of the free-market, really constitute grants of special privilege by the State. No other firm can "compete" with Hershey chocolates by producing its own product and calling it Hershey chocolates.[34] Is this not a State-imposed restriction on freedom of entry? And how can there be "real" freedom of entry under such conditions?

This argument, however, completely misconceives the nature of liberty and of property. Every individual in the free society has a right to ownership of his *own self* and to the exclusive use of his own property. Included in his property is his *name,* the linguistic label which is uniquely his and is identified with him. A name is an essential part of a man's identity and therefore of his property. To say that he is a "monopolist" over his name is saying no more than that he is a "monopolist" over his own will or property, and such an extension of the word "monopolist" to every individual in the world would be an absurd usage of the term. The "governmental" function of defense of person and property, vital to the existence of a free society so long as any people are disposed to invade them, involves the defense of each person's particular name or trade-mark against the fraud of *forgery* or *imposture.* It means the outlawing of John Smith's pretending to be Joseph Williams, a prominent lawyer, and selling his own legal advice after stating to clients that he is selling that of Williams. This fraud is not only implicit theft of the consumer, but it is also abusing the property right of Joseph Williams to his unique name and individuality. And the use by some other chocolate firm of the Hershey label would be an equivalent perpetration of an invasive act of fraud and forgery.[35]

Before adopting this definition of monopoly as the proper one, we must consider a final alternative: the defining of a monopolist as *a person who has achieved a monopoly price* (definition 3). This definition has never been explicitly set forth, but it has been implicit in the most worthwhile of the neoclassical writings on this subject. It has the merit of focusing attention on the important economic question of monopoly price, its nature and consequences. In this connection, we shall now investigate the neoclassical theory of monopoly price and inquire whether it really has the substance it seems at first glance to possess.

B. THE NEOCLASSICAL THEORY OF MONOPOLY PRICE [36]

In previous sections we have referred to a monopoly price as one established either by a monopolist or by a cartel of producers. At this point we must investigate the theory more closely. A succinct definition of monopoly price has been supplied by Mises:

> If conditions are such that the monopolist can secure higher net proceeds by selling a smaller quantity of his product at a higher price than by selling a greater quantity of his supply at a lower price, there emerges a *monopoly price* higher than the potential market price would have been in the absence of monopoly.[37]

The monopoly price doctrine may be summed up as follows: A certain quantity of a good, when produced and sold, yields a *competitive price* on the market. A monopolist or a cartel of firms can, if *the demand curve is inelastic at the competitive-price point,* restrict sales and raise the price, to arrive at the point of maximum returns. If, on the other hand, the demand curve as it presents itself to the monopolist or cartel is *elastic* at the competitive-price point, the monopolist will not restrict sales to attain a higher price. As a result, as Mises points out, there is no need to be concerned with the "monopolist" (in the sense of definition 1 above); whether or not he is the sole producer of a commodity is unimportant and irrelevant for catallactic problems. It becomes important only if the configuration of his demand curve enables him to restrict sales and achieve a higher income at a monopoly price.[38] If he learns about the inelastic demand curve *after* he has erroneously produced too great a stock, he must destroy or withhold part of his stock; after that, he restricts production of the commodity to the most remunerative level.

The monopoly price analysis is portrayed in the diagram in Fig. 67. The basic assumption, usually only implicit, is that there is some identifiable stock, say *OA,* and some identifiable market

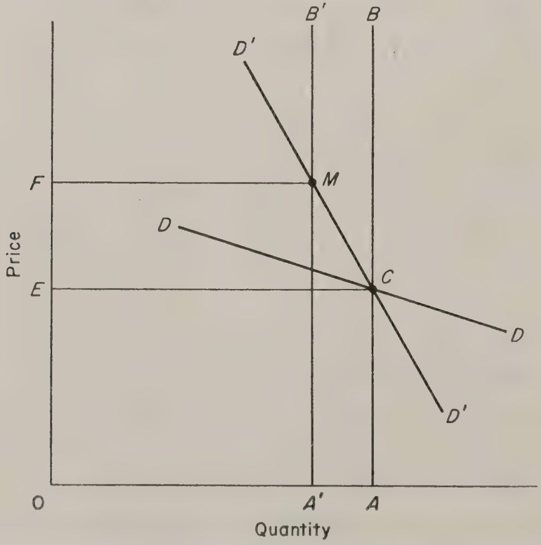


FIG. 67. FORMATION OF A MONOPOLY PRICE ACCORDING TO NEOCLASSICAL DOCTRINE

price, say, *AC,* which will result from *competitive* conditions. *AB* then represents the stock line under "competition." Then, according to the theory, if the demand curve is *elastic* above this price, there will be no occasion to restrict sales and obtain a higher, or "monopoly," price. Such a demand curve is *DD.* On the other hand, if the demand curve is inelastic above the competitive-price point, as in *D'D',* it will pay the monopolist to restrict sales to, say, *OA'* (stock line represented by *A'B'*) and achieve a monopoly price, *A'M.* This would yield the maximum monetary income for the monopolist.[39]

The inelastic demand curve, giving rise to an opportunity to monopolize, may present itself either to a single monopolist of a given product or to "an industry as a whole" when organized into a cartel of the different producers. In the latter case, *the demand curve, as it presents itself to each firm, is elastic.* At the competitive price, if one firm raises its price, the customers preponderantly shift to purchasing from its competitors. On the other hand, if the firms are cartelized, in many cases the lesser range of substitution by consumers would render *the demand curve, as presented to the cartel, inelastic.* This condition serves as the impetus to the formation of the cartels studied above.

C. CONSEQUENCES OF MONOPOLY-PRICE THEORY

1) *The Competitive Environment*

Before engaging in a critical analysis of the monopoly-price theory itself, we might explore some of the consequences which do or do not follow from it. In this section we for the moment assume that the monopoly-price theory is valid.[40] In the first place, it is *not* true that the "monopolist" (used here in the sense of definition 3—*an obtainer of a monopoly price*) is removed from the influence of competition or has the power to dictate to consumers at will. The best of the monopoly-price theorists admit that the monopolist is as subject to the forces of competition as are other firms. The monopolist cannot set prices as high as he would like, being limited by the configurations of consumer demand. By definition, in fact, the demand curve as presented to the monopolist *becomes elastic above the monopoly-price point.* There has been an unfortunate tendency of writers to refer to an "elastic demand curve" or an "inelastic demand curve" without pointing out that every curve has different *ranges* along which there will be varying degrees of elasticity or inelasticity. By definition, the monopoly-price point is that which maximizes the firm's or the cartel's income; above that price any further "restriction" of production and sales will lower the monopolist's monetary income. This implies that the *demand curve will become elastic above that point,* just as it is also elastic above the *competitive-price* point when that is established on the market. Consumers make the curve elastic by their power of substituting purchases of other goods. Many other goods compete "directly" in their use-value to the consumer. If some firm or combination of firms should, for example, achieve a monopoly-price for cake soap, housewives can shift to detergents and thus limit the height of the monopoly price. But, in addition, *all goods,* without exception, compete for the consumer's dollar or gold ounce. If the price of yachts becomes too high, the consumer can substitute expenditure on mansions, or he can substitute books for television sets, etc.[41]

Furthermore, as the market advances, as capital is invested and the market becomes more and more specialized, the demand curve for each product tends to become more and more *elastic.* As the market develops, the range of consumers' goods available increases enormously. The more consumers' goods are available, the more goods can be purchased by consumers, and the more elastic, *ceteris paribus,* the demand curve for each good will tend to be. As a result, the opportunities for the establishment of monopoly prices will tend to diminish as the market and "capitalist" methods develop.

2) *Monopoly Profit vs. Monopoly Gain to a Factor*

Many monopoly-price theorists have declared that establishment of the monopoly price means that the monopolist is able to attain permanent "monopoly profits." This is then contrasted with "competitive" profits and losses, which, as we have seen, disappear in the evenly rotating economy. Under "competition," if one firm is seen to be making great profits in a particular productive process, other firms rush in to take advantage of the anticipated opportunities, and the profits disappear. But in the case of the monopolist, it is asserted, his unique position allows him to keep making these profits permanently.[42]

To use such terminology is to misconceive the nature of "profit" and "loss." Profits and losses are purely the results of entrepreneurial activity, and that activity is the consequence of the uncertainty of the future. Entrepreneurship is the action on the market that takes advantage of estimated discrepancies between selling prices and buying prices of factors. The better forecasters make profits, and the incorrect ones suffer losses. In the evenly rotating economy, where everyone has settled down to an unchanging round of activity, there can be no profit or loss because there is no uncertainty on the market. The same is true for the monopolist. In the evenly rotating economy, he obtains his "specific monopoly gain," *not* as an entrepreneur, but as the owner of the product which he sells. His monopoly gain is an added *income* to his monopolized product; whether for an individual or for a cartel, it is this product which earns more income through restriction of its supply.

The question arises: Why cannot other entrepreneurs seize the gainful opportunity and enter into the production of this good, thereby tending to eliminate the opportunity? In the case of the cartel, this is precisely the tendency that will always prevail and lead to the breakup of a monopoly-price position. Even if new firms entering the industry are "bought off" by being offered quotal positions in the old cartel, and both the new and the old firms have been able to agree on allocations of production and income, such actions will not suffice to preserve the cartel. For new firms will be tempted to acquire a share in the monopoly gains, and ever more will be created until the entire cartel operation is rendered unprofitable, there being too many firms to share the benefits. In such situations, the pressure will become greater and greater for the more efficient firms to cut loose from the cartel and to refuse further to provide a comfortable shelter for the host of inefficient firms.

In the case of a single monopolist, either his brand name and unique good will with the consumers prevents others from taking away his monopoly gains, or else he is a recipient of special monopoly privilege from the government, in which case other producers are prevented by force from producing the same good.

Our analysis of monopoly gain must be pursued further. We have said that the gain is derived from income from the sale of a certain product. But this product must be produced by *factors,* and we have seen that the return to any product is resolved into returns to the factors which produce it. Such "imputation," in the market, must also take place for monopoly gains. Let us say, for example, that the Staunton Washing Machine Company has been able to achieve a monopoly price for its product. It is clear that the monopoly gain cannot be attributed to the machines, the plant, etc., which produce the washers. If the Staunton Company bought these machines from other producers, then any monopoly gains would, in the long run, as the machines were replaced, accrue to the producers of the machines. In the evenly rotating economy, where entrepreneurial profits and losses disappear, and the price of a product equals the sum of the prices of its factors, all the monopoly gain would accrue to a *factor* and not a product. Furthermore, *no* income, except time income, could accrue to the owner of a capital good, because every capital good must, in turn, be produced by higher-order factors. Ultimately, all capital goods are resolvable into *labor, land,* and *time* factors. But if the Staunton Washing Machine Company cannot *itself* achieve a monopoly gain from a monopoly price, then obviously it does not benefit by restricting production in order to obtain this gain. Therefore, just as *no* income in the evenly rotating economy can accrue specifically to owners of capital goods, neither can specific monopoly gains.

The monopoly gains must, then, be imputed to either labor or land factors. In the case of a *brand* name, for example, a certain *kind* of labor factor is being monopolized. A name, as we have seen, is a unique identifying label for a person (or a group of persons acting co-operatively), and is therefore an attribute of the *person* and his energy. Considered *generally,* labor is the term designating the productive efforts of personal energy, whatever its concrete content. A brand name, therefore, *is an attribute of a labor factor,* specifically the owner or owners of the firm. Or, considered *catallactically,* the brand name represents the *decision-making rent* accruing to the owner and his name. If a monopoly price is achieved by the baseball prowess of Mickey Mantle, this is a specific monopoly gain attributable to a labor factor. In both of these cases, then, the monopoly price stems, not simply from the unique possession of the final product, but, more basically, *from the unique possession of one of the factors necessary to the final product.*

A monopoly gain might also be imputable to ownership of a unique natural resource or "land" factor. Thus, a monopoly price for diamonds may be attributable to a monopoly of diamond mines, from which diamonds must be ultimately produced.

Under the analysis of monopoly price, then, there cannot be, in the evenly rotating system, any such thing as "monopoly profits"; there are only specific monopoly income gains to owners of labor or land factors. No monopoly gain can accrue to an owner of a capital good. If a monopoly price has been imposed because of a grant of monopoly privilege by the State, then obviously the monopoly gain is attributable to this special privilege.[43]

3) *A World of Monopoly Prices?*

Is it possible, within the framework of monopoly-price theory, to assert that *all prices* on the free market may be *monopoly* prices?[44] *Can* all selling prices be monopoly prices?

There are two ways in which we may analyze this problem. One is by turning our attention to the monopolized industry. As we have seen, the industry with a monopoly price restricts production in that industry (either by a cartel or a single firm), thereby releasing nonspecific factors to enter other fields of production. But it is evidently impossible to conceive of a world of monopoly prices, because this would imply a piling up of unused nonspecific factors. Since wants do not remain unfulfilled, labor and other nonspecific factors will be used somewhere, and the industries that acquire *more* factors and produce more cannot be monopoly-price industries. *Their* prices will be *below* the competitive price level.

We may also consider consumer demand. We have seen that a necessary condition for the establishment of monopoly price is a consumers' demand schedule inelastic above the competitive-price point. Obviously, it is impossible for *every* industry to have such an inelastic demand schedule. For the definition of *inelastic* is that consumers will spend a greater total sum of money on the good when the price is higher. But consumers have a certain given total stock of money assets and money income, as well as a given amount, at any one time, which they may allocate to consumption spending. If they spend more on a certain good, they have less to spend on other goods. Therefore, they cannot spend more on *every* good, and not all prices can be monopoly prices.

There can never, then, be a world of monopoly prices, even assuming monopoly-price theory. Because of the fixity of consumers' monetary stock and the employment of displaced factors, monopoly prices could not be established in more than approximately half of the economy's industries.

4) *"Cutthroat" Competition*

A popular theme in the literature is the alleged evil of "cutthroat competition." Curiously, cutthroat, or "excessive," competition, is linked by critics to the achievement of a monopoly price. The usual charge is that a "big" firm, for example, deliberately sells below the most profitable price, even to the extent of suffering losses. The firm acts so peculiarly in order to force another firm producing the same product to cut its price also. The "stronger" firm, with the capital resources to endure the losses, then drives the "weaker" firm out of business and establishes a monopoly of the field.

But, first, what is wrong with such a monopoly (definition 1)? What is wrong with the fact that the firm more efficient in serving the consumer remains in business, while consumers refuse to patronize the inefficient firm? A firm's suffering losses signifies that it is not as successful as other firms in serving consumer desires. Factors then shift from the inefficient to the efficient firms. A firm's going out of business harms no owner of any factor it employs and injures only the entrepreneur who miscalculated in his advance-production decisions. A firm goes out of business precisely because it suffers entrepreneurial losses, i.e., its monetary revenues in sales to consumers are less than the money it paid out previously to owners of factors. But so much money had to be paid out for factors, i.e., costs were so high, because these factors could earn as much money elsewhere. If this entrepreneur cannot profitably employ the factors at their given prices, the reason is that factor-owners can sell their services to other firms. In so far as factors may be specific to the firm, and to the extent that their owners will accept a reduced price and income as the price of the firm's product is reduced, total money costs can be reduced and the firm can be maintained in operation. Therefore, failure by business firms is due solely to entrepreneurial error in forecasting and to entrepreneurial inability to secure the factors of production by outbidding those firms more successful in serving the consumer.[45] Thus, the elimination of inefficient firms cannot harm factor-owners or lead to their "unemployment," since their failure was due precisely to the more attractive competing bids made by other firms (or, in some cases, to the alternatives of leisure or production outside the market). Their failure also helps consumers by transferring resources from wasteful to efficient producers. It is largely the entrepreneurs who suffer from their own errors, errors incurred through their own voluntarily adopted risks.

It is curious that the critics of "cutthroat competition" are generally the same as those who complain about the market's subversion of "consumers' sovereignty." For selling a product at very low prices, even at short-term losses, is a bonanza to the consumers, and there is no reason why this gift to the consumers should be deplored. Furthermore, if the consumers were really indignant about this form of competition, they would scornfully refuse to accept this gift and instead continue to patronize the allegedly "victimized" competitor. When they do not do so and instead rush to acquire the bargains, they are indicating their perfect contentment with this state of affairs. From the point of view of consumers' sovereignty or individual sovereignty, there is nothing at all wrong with "cutthroat competition."

The only conceivable problem is the one usually cited: that after the single firm has driven everyone else out of business through sustained selling at very low prices, *then* the final monopolist will restrict sales and raise its price to a monopoly price. Even granting for a moment the tenability of the monopoly-price concept, this does not seem a very likely occurrence. In the first place, it is time enough to complain *after* the monopoly price is established, especially since we have seen that we cannot consider "monopoly" *per se* (definition 1) as an evil.[46] Secondly, a firm will not always be able to achieve a monopoly price. In all such cases, including (*a*) where not all the other firms in the industry can be driven out, or (*b*) where the demand curve is such that the monopolist cannot achieve a monopoly price, the "cutthroat competition" is then a pure boon with no harmful effects.

Incidentally, it is by no means true that the *large* firms will always be the strongest in a "price-cutting war." Often, depending on the concrete conditions, it is the smaller, more mobile firm, not burdened with heavy investments, that is able to "cut its costs" (particularly when its factors are more specific to it, such as the labor of its management) and outcompete the larger firm. In such cases, of course, there is no monopoly-price problem whatever. The fact that the lowly pushcart peddler for centuries has been set upon by governmental violence at the behest of his more lordly and heavily capitalized competitors bears witness to the practical possibilities of such a situation.[47]

Suppose, however, that after this lengthy and costly process, a firm has finally been able to achieve a monopoly price by the route of "cutthroat competition." What is there to prevent this monopoly gain from attracting other entrepreneurs who will try to undercut the existing firm and achieve some of the gain for themselves? What is to prevent new firms from coming in and driving the price down to competitive levels again? Is the firm to resume "cutthroat competition" and the same deliberate losing process once more? In that case, we are likely to find that consumers of the good will be receiving gifts far more often than facing a monopoly price.[48]

Professor Leeman has pointed out[49] that the smaller firm, driven out by "cutthroat competition," may simply close down, wait for the larger firm to reap its expected gain of a higher "monopoly price," and then reopen! More important, even if the small firm is driven into bankruptcy, its *physical plant* remains intact, and it may be bought by a new entrepreneur at bargain prices. As a result, the new firm will be able to produce at very low cost and damage the "victor" firm considerably. To avoid this threat, the big firm would have to delay raising its price for the very long time required for the small plant to wear out or become obsolete.

Leeman also demonstrates that the big firm could not keep new, small firms out by a mere *threat* of cutthroat competition. For (*a*) new firms will probably interpret the high price charged by the "monopolist" as a sign of inefficiency, providing a ripe opportunity for profits; and (*b*) the "monopolist" can demonstrate his power satisfactorily only by *actually* selling at low prices for long periods of time. Hence, only by keeping its costs down and its prices low, i.e., by *not* extracting a monopoly price, can the "victor" firm keep out potential rivals. But this means that the cutthroat competition, far from being a route to a monopoly price, was a pure gift to consumers and a pure loss to the "victor."[50]

But what of a standard problem brought forward by critics of "cutthroat competition"? Cannot the big firm check the entry of efficient small firms by simply buying up the new rival's plant and putting it out of production? Perhaps a short period of cutthroat price-cutting will convince the new small firm of the advantage of selling out and will permit the monopolist to avoid the long periods of losses just mentioned.

No one seems to realize, however, the high costs such buying will entail. Leeman points out that the really efficient small firm can demand such a high price for its assets as to make the whole procedure prohibitively expensive. And, further, any later attempt by the large firm to recoup its losses by charging the monopoly price will only invite new entry by other firms and redouble the expensive buying-out process again and again. Buying out competitors, then, will be even more costly than simple cutthroat competition, which we have seen to be unprofitable.[51, 52]

A final argument against the doctrines of "cutthroat competition" is that *it is impossible to determine whether it is taking place or not.* The fact that a monopoly might ensue afterward does not even establish the motive and is certainly no *criterion* of cutthroat procedures. One proposed criterion has been selling "below costs"—most cogently, below what is usually termed "variable costs," the expenses of using factors in production, assuming previously sunk investment in a fixed plant. But this is no criterion at all. As we have already declared, *there is no such thing as costs* (apart from speculation on a higher future price) *once the stock has been produced.* Costs take place along the path of decisions to produce—at each step along the way that investments (of money and effort) are made in factors. The allocations, the opportunities forgone, take place at each step as future production decisions must be taken and commitments made. Once the stock has been produced, however (and there is no expectation of a price rise), the sale is *costless,* since there are no advantages forgone by selling the product (costs in making the sale being here considered negligible for purposes of simplification). Therefore, the stock will tend to be sold at whatever price is obtainable. There is no such thing, then, as "selling below costs" on stock already produced. The cutting of price may just as well be due to inability to dispose of stock at any higher price as to "cutthroat" competition, and it is impossible for an observer to separate the two elements.

D. THE ILLUSION OF MONOPOLY PRICE ON THE UNHAMPERED MARKET

Up to this point we have explained the neoclassical theory of monopoly price and have pointed out various misconceptions about its consequences. We have also shown that there is nothing bad about monopoly price and that it constitutes no infringement on any legitimate interpretation of individuals' sovereignty or even of consumers' sovereignty. Yet there has been a great deficiency in the economic literature on this whole issue: a failure to realize *the illusion in the entire concept of monopoly price.*[53] If we turn to the definition of monopoly price on page 593 above, or the diagrammatic interpretation in Fig. 67, we find *that there is assumed to be* a "competitive price," to which a higher "monopoly price"—an outcome of restrictive action—is contrasted. Yet, if we analyze the matter closely, it becomes evident that the entire contrast is an illusion. In the market, *there is no discernible, identifiable competitive price,* and therefore there is no way of distinguishing, even conceptually, any given price as a "monopoly price." The alleged "competitive price" can be identified neither by the producer himself nor by the disinterested observer.

Let us take a firm which is considering the production of a certain good. The firm can be a "monopolist" in the sense of producing a unique good, or it can be an "oligopolist" among a few firms. Whatever its position, it is irrelevant, because we are interested only in whether or not it can achieve a monopoly price as compared to a competitive price. This, in turn, depends on the elasticity of the demand curve as it is presented to the firm *over a certain range.* Let us say that the firm finds itself with a certain demand curve (Fig. 68).

The producer must decide how much of the good to produce and sell in a future period, i.e., at the time when this demand curve will become relevant. He will set his output at whatever point is expected to maximize his monetary earnings (other psychic factors being equal), taking into consideration the necessary monetary expenses of production for each quantity, i.e., the amounts that can be produced for each amount of money invested. As an entrepreneur he will attempt to maximize profits, as a labor-owner to maximize his monetary income, as a landowner to maximize his monetary income from that factor.

On the basis of this logic of action, the producer sets his in-

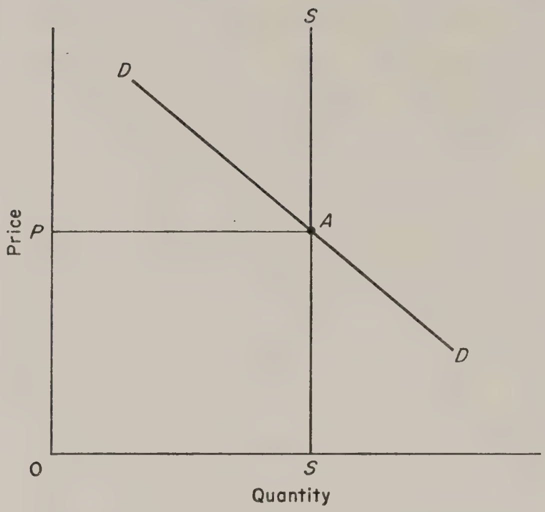


FIG. 68. PRICE FORMATION IN A FREE MARKET

vestment to produce a certain stock, or as a factor-owner to sell a certain amount of service, say *OS*. Assuming that he has correctly estimated his demand curve, the intersection of the two will establish the market-equilibrium price, *OP* or *SA*.

The critical question is this: Is the market price, *OP,* a "competitive price" or a "monopoly price"? The answer is that *there is no way of knowing*. Contrary to the assumptions of the theory, there is no "competitive price" which is clearly established somewhere, and which we may compare *OP* with. Neither does the elasticity of the demand curve establish any criterion. Even if all the difficulties of discovering and identifying the demand curve were waived (and this identifying can be done, of course, only by the producer himself—and only in a tentative fashion), we have seen that the price, if accurately estimated, will always be set by the seller so that the *range above the market price will be elastic.* How is anyone, including the producer himself, to know whether or not this market price is competitive or monopoly?

Suppose that, after having produced *OS,* the producer decides that he will make more money if he produces less of the good in the next period. Is the higher price to be gained from such a cutback necessarily a "monopoly price"? Why could it not just as well be a movement from a *subcompetitive* price to a competitive price? In the real world, a demand curve is not simply "given" to a producer, but must be estimated and discovered. If a producer has produced too much in one period and, in order to earn more income, produces less in the next period, *this is all that can be said about the action.* For there is no criterion that will determine whether or not he is moving from a price *below* the alleged "competitive price" or moving *above* this price. Thus, we cannot use "restriction of production" as the test of monopoly vs. competitive price. A movement from a subcompetitive to a competitive price also involves a "restriction" of production of this good, coupled, of course, with an expansion of production in other lines by the released factors. *There is no way whatever to distinguish such a "restriction" and corollary expansion from the alleged "monopoly-price" situation.*

If the "restriction" is accompanied by increased leisure for the owner of a labor factor rather than increased production of some other good on the market, it is still an expansion of the yield of a consumers' good—leisure. There is still no way of determining whether the "restriction" resulted in a "monopoly" or a "competitive" price or to what extent the motive of increased leisure was involved.

To define a *monopoly price* as a price attained by selling a smaller quantity of a product at a higher price is therefore meaningless, since the same definition applies to the "competitive price" as compared with a subcompetitive price. There is no way to define "monopoly price" because there is also no way of defining the "competitive price" to which the former must refer.

Many writers have attempted to establish some criterion for distinguishing a monopoly price from a competitive price. Some call the monopoly price that price achieving permanent, long-run "monopoly profits" for a firm. This is contrasted to the "competitive price," at which, in the evenly rotating economy, profits disappear. Yet, as we have already seen, there are never permanent monopoly profits, but only monopoly gains to owners of land or labor factors. Money costs to the entrepreneur, who must buy factors of production, will tend to equal money revenues in the evenly rotating economy, whether the price is competitive or monopoly. The monopoly gains, however, are secured as *income* to labor or land factors. *There is therefore never any identifiable element that could provide a criterion of the absence of monopoly gain.* With a monopoly gain, the factor's income is greater; without it, it is less. But where is the criterion for distinguishing this from a change in the income of a factor for "legitimate" demand and supply reasons? How distinguish a "monopoly gain" from a simple increase in factor income?

Another theory attempts to define a monopoly gain as income to a factor greater than that received by another, similar factor. Thus, if Mickey Mantle receives a greater monetary income than another outfielder, that difference represents the "monopoly gain" resulting from his natural monopoly of unique ability. The crucial difficulty with this approach is that it implicitly adopts the old classical fallacy of treating all the various labor factors, as well as all the various land factors, as somehow homogeneous. If all the labor factors are somehow *one* good, then the variations in income accruing to each must be explained by reference to some sort of "monopolistic" or other mysterious element. Yet a good with a homogeneous supply is only a *good* if all its units are interchangeable, as we saw at the beginning of this work. But the very fact that Mantle and the other outfielder are treated differently in the market signifies that they are selling *different,* not the same, goods. Just as in tangible commodities, so in personal labor services (whether sold to other producers or to consumers directly): each seller may be selling a unique good, and yet he is "competing" with more or less close substitutability against all the other sellers for the purchases of consumers (or lower-order producers). But since each good or service is unique, we cannot state that the difference between the prices of any two represents any sort of "monopoly price"; monopoly price vis à vis competitive price can refer only to alternative prices *of the same good.* Mickey Mantle may indeed be a person of unique ability and a "monopolist" (*as is everyone else*) over the disposition of his own talents, but whether or not he is achieving a "monopoly price" (and therefore a monopoly gain) from his service can never be determined.

This analysis is equally applicable to land. It is just as illegitimate to dub the difference between the income of the site of the Empire State Building and that of a rural general store a "monopoly gain" as to apply the same concept to the additional income of Mickey Mantle. The fact that both areas are land makes them no more homogeneous on the market than the fact that Mickey Mantle and Joe Doakes are both baseball players or, in a broader category, both laborers. The fact that each is remunerated at a different price and income signifies that they are considered different on the market. To treat differential gains for *different* goods as instances of "monopoly gain" is to render the term completely devoid of significance.

Neither is the attempt to establish the existence of idle resources as a criterion of monopolistic "withholding" of factors any more valid. Idle labor resources will always mean increased leisure, and therefore the leisure motive will always be intertwined with any alleged "monopolistic" motive. It therefore becomes impossible to separate them. The existence of idle land may always be due to the fact of the relative scarcity of labor as compared with available land. This relative scarcity makes it more serviceable to consumers, and hence more remunerative, to invest labor in certain areas of land, and not in others. The land areas least productive of potential earnings will be forced to lie idle, the amount depending on how much labor supply is available. We must stress that all "land" (i.e., every nature-given resource) is involved here, including urban sites and natural resources as well as agricultural areas. The allocation of labor to land is comparable to Crusoe's having to decide on which plot of ground to build his shelter or in which stream to fish. Because of the natural, as well as voluntary, limitations on his labor effort, that area of land on which he produces the highest utility will be cultivated, and the rest will be left idle. This element also cannot be separated from any alleged monopolistic element. For if someone objects that the "withheld" land is of the *same quality* as the land in use and therefore that monopolistic restriction is afoot, it may always be answered that the two pieces of land *necessarily* differ—in *location* if in no other attribute—and that the very fact that the two are treated differently on the market tends to confirm this difference. By what mystical criterion, then, does some outsider assert that the two lands are economically identical? In the case of capital goods it is also true that the limitations of available labor supply will often make idle those goods which are expected to yield a lesser return as compared with other capital that can be employed by labor. The difference here is that idle capital goods are always the result of previous *error* by producers, since no such idleness would be necessary if the present events—demands, prices, supplies—had all been forecast correctly by all the producers. But though error is always unfortunate, the keeping idle of unremunerative capital is the best course to follow; it is making the best of the *existing* situation, not of the situation that would have obtained if foresight had been perfect. In the evenly rotating economy, of course, there would never be idle capital goods; there would be only idle land and idle labor (to the extent that leisure is voluntarily preferred to money income). In no case is it possible to establish an identification of purely "monopolistic" withholding action.

A similar proposed criterion for distinguishing a monopoly price from a competitive price runs as follows: In the competitive case, the marginal factor produces no rent; in the monopoly-price case, however, use of the monopolized factor is restricted, so that its marginal use *does* yield a rent. We may answer, in the first place, that there is no reason to say that every factor will, in the competitive case, always be worked until it yields *no* rent. On the contrary, every factor is worked in a region of *diminishing* but positive marginal product, not zero product. Indeed, as we have shown above, if the value product of a unit of a factor is zero, it will not be used at all. Every unit of a factor is used because it yields a value product; otherwise, it would not be used in production. And if it yields a value product, it will earn its discounted value product in income.

It is clear, further, that this criterion could never be applied to a monopolized labor factor. What labor factor earns a *zero* wage in a competitive market? Yet many monopolized (definition 1) factors are labor factors—such as brand names, unique services, decision-making ability in business, etc. Land is more abundant than labor, and therefore some lands will be idle and receive zero rent. Even here, however, it is only the *sub*marginal lands that receive no rent; the *marginal* lands in use receive *some* rent, however small.

Furthermore, even if it were true that marginal lands received zero rent, this would be irrelevant for our discussion. It would apply only to "poorer" or "inferior," as compared with more productive, lands. But a criterion of monopoly or competitive price must apply, *not* to factors of *different* quality, but to homogeneous factors. The monopoly-price problem is one of a supply of units of *one* homogeneous factor, *not* of various different factors within the one broad category, land. In this case, as we have stated, every factor will earn some value product in a diminishing zone, and not zero.[54]

Since, in the "competitive" case, all factors in use will earn some rent, there is still no basis for distinguishing a "competitive" from a "monopoly" price.

Another very common attempt to distinguish between a competitive and a monopoly price rests on the alleged ideal of "marginal-cost pricing." Failure to set prices equal to marginal cost is considered an example of "monopoly" behavior. There are several fatal errors in this analysis. In the first place, as we shall see further below, there *can be* no such thing as "pure competition," that hypothetical state in which the demand curve for the output of a firm is infinitely elastic. Only in this never-never land does price equal marginal cost in equilibrium. Otherwise, marginal cost equals "marginal revenue" in the ERE, i.e., the revenue that a given increment of cost will yield to the firm. (Only if the demand curve were perfectly elastic would marginal revenue boil down to "average revenue," or price.) There is now no way of distinguishing "competitive" from "monopolistic" situations, since marginal cost will in *all* cases tend to equal marginal revenue.

Secondly, this equality is only a *tendency* that *results from* competition; it is not a *precondition* of competition. It is a property of the equilibrium of the ERE that the market economy always tends toward, but never can reach. To uphold it as a "welfare ideal" for the real world, an ideal with which to gauge existing conditions, as so many economists have done, is to misconceive completely the nature of the market and of economics itself.

Thirdly, there is no reason why firms should ever deliberately balk at being guided by marginal-cost considerations. Their aiming at maximum net revenue will see to that. But there is no one simple, determinate "marginal cost," because, as we have seen above, there is no one identifiable "short-run" period, such as is assumed by current theory. The firm faces a gamut of variable periods of time for the investment and use of factors, and its pricing and output decisions depend on the future period of time which it is considering. Is it buying a new machine, or is it selling old output piled up in inventory? The marginal cost considerations will differ in the two cases.

It is clear that it is impossible to distinguish competitive or monopolistic behavior on the part of a firm. It is no more possible to speak of monopoly price in the case of a cartel. In the first place, a cartel, when it sets the amount of its production in advance for the next period, is in *exactly the same* position as the single firm: it sets the amount of its production at that point which it believes will maximize its monetary earnings. There is still no way of distinguishing a monopoly from a competitive or a subcompetitive price.

Furthermore, we have seen that there is no essential difference between a cartel and a merger, or between a merger of producers with money assets and a merger of producers with previously existing capital assets to form a partnership or corporation. As a result of the tradition, still in evidence in the literature, of identifying a *firm* with a *single* individual entrepreneur or producer, we tend to overlook the fact that most existing firms are constituted through the voluntary merging of monetary assets. To pursue the similarity further, suppose that firm A wishes to expand its production. Is there an essential difference between its buying new land and building a new plant, and its purchasing an old plant owned by another firm? Yet the latter case, if the plant constitutes all the assets of firm B, will involve, in fact, a merger of the two firms. The degree of merger or the degree of independence in the various parts of the productive system will depend entirely upon the most remunerative method for the producers concerned. This will also be the method most serviceable to the consumers. And there is no way of distinguishing between a cartel, a merger, and one larger firm.

It might be objected at this point that there are many useful, indeed indispensable, theoretical concepts which cannot be practically isolated in their pure form in the real world. Thus, the interest rate, in practice, is not strictly separable from profits, and the various components of the interest rate are not separable in practice, but they can be separated in analysis. But these concepts *are each definable in terms independent of one another and of the complex reality being investigated.* Thus, the "pure" interest rate may never exist in practice, but the market interest rate is theoretically analyzable into its components: pure interest rate, price-expectation component, risk component. They are so analyzable because each of these components is *definable independently* of the complex market-interest rate and, *moreover, is independently deducible from the axioms of praxeology.* The existence and determination of the pure interest rate is strictly deducible from the principles of human action, time preference, etc. Each of these components, then, is arrived at *a priori* in relation to the concrete market interest rate itself and is deduced from previously established truths about human action. In all such cases, the components are definable through independently established theoretical criteria. In this case, however, there is, as we have seen, *no independent way by which we can define and distinguish a "monopoly price" from a "competitive price."* There is no prior rule available to guide us in framing the distinction. To say that the monopoly price is formed when the configuration of demand is inelastic above the competitive price tells us nothing because we have no way of independently defining the "competitive price."

To reiterate, the seemingly unidentifiable elements in other areas of economic theory are independently deducible from the axioms of human action. Time preference, uncertainty, changes in purchasing power, etc., can all be independently established by prior reasoning, and their interrelations analyzed through the method of mental constructions. The evenly rotating economy can be seen as the ever-moving goal of the market, through our analysis of the direction of action. But here, all that we know from prior analysis of human action is that individuals co-operate on the market to sell and purchase factors, transform them into products, and expect to sell the products to others—eventually to final consumers; and that the factors are sold, and entrepreneurs undertake the production, in order to obtain monetary income from the sale of their product. How much any given person will produce of any given good or service is determined by his expectations of greatest monetary income, other psychic considerations being equal. But nowhere in the analysis of such action is it possible to separate conceptually an alleged "restrictive" from a nonrestrictive act, and nowhere is it possible to define "competitive price" in any way that would differ from the *free-market price*. Similarly, there is no way of conceptually distinguishing "monopoly price" from *free-market price*. But if a concept has no possible grounding in reality, then it is an empty and illusory, and not a meaningful, concept. On the free market there is no way of distinguishing a "monopoly price" from a "competitive price" or a "subcompetitive price" or of establishing any changes as movements from one to the other. No criteria can be found for making such distinctions. The concept of monopoly price as distinguished from competitive price is therefore untenable. We can speak only of the *free-market price*.

Thus, we conclude not only that there is nothing "wrong" with "monopoly price," but also that the entire concept is meaningless. There is a great deal of "monopoly" in the sense of a single owner of a unique commodity or service (definition 1). But we have seen that this is an inappropriate term and, further, that it has no catallactic significance. A "monopoly" would be of importance only if it led to a monopoly price, and we have seen that there is no such thing as a monopoly price or a competitive price on the market. There is only the "free-market price."

E. SOME PROBLEMS IN THE THEORY OF THE ILLUSION OF MONOPOLY PRICE

1) *Location Monopoly*

It might be objected that in the case of a *location monopoly,* a monopoly price *can* be distinguished from a competitive price on a free market. Let us consider the case of cement. There are cement consumers, say, who live in Rochester. A cement firm in Rochester could competitively charge a mill price of X gold grams per ton. The nearest competitor is stationed in Albany, and freight costs from Albany to Rochester are 3 gold grams per ton. The Rochester firm is then able to increase its price to obtain $(X + 2)$ gold grams per ton from Rochester consumers. Does its locational advantage not confer upon it a monopoly, and is not this higher price a monopoly price?

First, as we have seen above, the good that we must consider is the good in the hands of the consumers. The Rochester firm is superior locationally for the Rochester market; the fact that the Albany firm cannot compete is not to be blamed on the Rochester firm. Location is also a factor of production. Furthermore, another firm could, if it wished, set itself up in Rochester to compete.

Let us, however, be generous to the location-monopoly theorists and grant that, in a sense (definition 1) this monopoly is enjoyed by *all* individual sellers of any good or service. This is due to the eternal law of human action, and indeed of all matter, *that only one thing can be in one place at one time.* The retail grocer on Fifth Street enjoys a monopoly of the sale of groceries *for that street;* the grocer on Fourth Street enjoys a monopoly of grocery service for *his street,* etc. In the case of stores which all cluster together in the same block, say radio stores, there are still a few feet of sidewalk over which each owner of a radio store exercises a location monopoly. Location is as specific to a firm or plant as ability is to a person.

Whether this element of location takes on any importance in the market depends on the configuration of consumer demand and on which policy is most profitable for each seller in the concrete case. In some cases a grocer, for example, can charge higher prices for his goods than another because of his monopoly of the block. In that case, his monopoly over the good "eggs available on Fifth Street" has taken on such a significance for the consumers in his block that he can charge them a higher price than the Fourth Street grocer and still retain their patronage. In other cases, he cannot do so because the bulk of his customers will desert him for the neighboring grocer if the latter's prices are lower.

Now, a good is homogeneous if consumers evaluate its units in the same way. If that condition holds, its units will be sold for a uniform price on the market (or rapidly tend to be sold at a uniform price). If, now, various grocers must adhere to a uniform price, then there *is* no location monopoly.

But what of the case where the Fifth Street grocer *can* charge a higher price than his competitor? Do we not have here a clear case of an identifiable monopoly price? Can we not say that the Fifth Street grocer who can charge more than his competitor for the same goods has found that the demand curve for his products is inelastic for a certain range above the "competitive price," the competitive price being taken as that equal to the price charged by his neighbor? Can we not say this even though we recognize that there is no "infringement on consumers' sovereignty" in this action, since it is due to the specific tastes of his consuming customers? The answer is an emphatic *No*. The reason is that the economist can never equate a good with some physical substance. A *good,* we remember, is a quantity of a thing divisible into a supply of homogeneous units. And this homogeneity, we repeat, must be in the minds of the consuming public, *not* in its physical composition. If a malted milk consumed at a luncheonette is the same good in the minds of consumers as the malted at a fashionable restaurant, then the price of the malted will be the same in both places. On the other hand, we have seen that the consumer buys not only the physical good, *but all attributes of a thing,* including its name, the wrappings, and the atmosphere in which it is consumed. If most of the consumers differentiate sufficiently between food consumed in the restaurant and food consumed at the luncheonette, so that a higher price can be charged in one case than in the other, then the food *is* a different good in each case. A malted consumed in the restaurant becomes, for a significant body of consumers, a *different good* from a malted consumed at the luncheonette. The same situation obtains for brand names, even in those situations where a minority of the consumers do regard several brands as "actually" the same good. As long as the bulk of the consumers regard them as different goods, then they *are* different goods, and their prices will differ. Similarly, goods may differ physically, but as long as they are regarded by consumers as the same, they *are* the same good.[55]

The same analysis applies to the case of location. Where the Fifth Street consumers regard groceries at Fifth Street as a significantly better good than groceries at Fourth Street, so that they are willing to pay more rather than walk the extra distance, *then the two will become different goods.* In the case of location, there will always be a tendency for the two to be different goods, but very often this will not be significant on the market. For a consumer may and almost always will prefer groceries available on this block to groceries available on the next block, but often this preference will *not be enough* to overcome any higher price for the former goods. If the bulk of the consumers shift to the latter good at a higher price, the *two, on the market, will be the same good.* And it is action on the market, real action, that we are interested in, not the nonsignificant pure valuations by themselves. In praxeology we are interested only in preferences that result in, and are therefore demonstrated by, *real choices,* not in the preferences themselves.

A good cannot be independently established as such apart from consumer preference on the market. Groceries on Fifth Street may be higher in price than groceries on Fourth Street to the Fifth Street consumers. If so, it will be because the former is a different good to the consumers. In the same way, Rochester cement may cost more than Albany cement *in Albany* to Rochester consumers, but the two are different goods by virtue of their difference in location. And there is no way of determining whether or not the price in Rochester or on Fifth Street is a "monopoly price" or a "competitive price" or of determining what the "competitive price" might be. It certainly could not be the price charged by the other firm elsewhere, since these prices are really for two different goods. There is no theoretical criterion by which we can distinguish simple locational income to sites from alleged "monopoly" income to sites.

There is another reason for abandoning any theory of locational monopoly price. If all sites are purely specific in locational value, there is no sense to the statement that they earn a "monopoly rent." For monopoly price, according to the theory, can be established only by selling less of a good and thus commanding a higher price. But *all* locational properties of a site differ in quality because they differ in location, and therefore there can be no restriction of sales to *part* of a site. Either a site is in production, or it is idle. But the idle sites necessarily differ in location from the sites in use and are therefore idle *because their value productivity is inferior.* They are idle because they are submarginal, not because they are "monopolistically" withheld parts of a certain homogeneous supply.

The locational-monopoly-price theorist, then, is refuted whichever way he turns. If he takes a limited view of locational monopoly (in the sense of definition 1) and confines it to such examples as Rochester vs. Albany, he can never establish a criterion for monopoly price, for another firm can enter Rochester, either actually or potentially, to bid away any locational profit that the first firm may earn. His prices cannot be compared with those of his competitors, because they are selling different goods. If the theorist takes an extensive view of locational monopoly—which would take into consideration the fact that every location necessarily differs from every other—and compares locations a few feet apart, then there is no sense at all in talking of "monopoly price," for (*a*) the price of a product at one location cannot be precisely compared with another, because they are different goods, and (*b*) each site is different in locational quality, and therefore no site can be conceptually split up into different homogeneous units —some to be sold and some to be withheld from the market. Each site is a unit in itself. But such a splitting is essential for the establishment of a monopoly-price theory.

2) *Natural Monopoly*

A favorite target of the critics of "monopoly" is the so-called "natural monopoly" or "public utility," where "competition is naturally not feasible." A typically cited case is the water supply of a city. It is supposed to be technologically feasible for only one water company to exist for serving a city. No other firms are therefore able to compete, and special interference is alleged to be necessary to curb monopoly pricing by this utility.

In the first place, such a "limited-space monopoly" is just one case in which only one firm in a field is profitable. How many firms will be profitable in any line of production is an institutional question and depends on such concrete data as the degree of consumer demand, the type of product sold, the physical productivity of the processes, the supply and pricing of factors, the forecasting of entrepreneurs, etc. Spatial limitations may be unimportant; as in the case of the grocers, the spatial limits may allow only the narrowest of "monopolies"—the monopoly over the portion of sidewalk owned by the seller. On the other hand, conditions may be such that only one firm may be feasible in the industry. But we have seen that this is irrelevant; "monopoly" is a meaningless appellation, unless monopoly price is achieved, and, once again, there is no way of determining whether the price charged for the good is a "monopoly price" or not. And this applies to *all* circumstances, including a nation-wide telephone firm, a local water company, or an outstanding baseball player. All these persons or firms will be "monopolies" within their "industry." And in all these cases, the dichotomy between "monopoly price" and "competitive price" is still an illusory one. Furthermore, there are no rational grounds by which we can preserve a separate sphere for "public utilities" and subject them to special harassment. A "public utility" industry does not differ conceptually from any other, and there is no nonarbitrary method by which we can designate certain industries to be "clothed in the public interest," while others are not.[56]

In no case, therefore, on the free market can a "monopoly price" be conceptually distinguished from a "competitive price." *All* prices on the free market are competitive.[57]

4. *Labor Unions*

A. RESTRICTIONIST PRICING OF LABOR

It might be asserted that labor unions, in exacting higher wage rates on the free market, are achieving identifiable monopoly prices. For here two *identifiable* contrasting situations exist: (*a*) where individuals sell their labor themselves; and (*b*) where they are members of labor unions which bargain on their labor for them. Furthermore, it is clear that while cartels, to be successful, must be economically more efficient in serving the consumer, no such justification can be found for unions. Since it is always the individual laborer who works, and since efficiency in organization comes from management hired for the task, forming unions *never* improves the productivity of an individual's work.

It is true that a union provides an identifiable situation. However, it is *not* true that a union wage rate could ever be called a monopoly price.[58] For the characteristic of the monopolist is precisely that he monopolizes a factor or commodity. To obtain a monopoly price, he sells only part of his supply and *withholds* selling the other part, because selling a lower quantity raises the price on an inelastic demand curve. It is the unique characteristic of labor in a free society, however, that it *cannot* be monopolized. Each individual is a self-owner and cannot be owned by another individual or group. Therefore, in the labor field, no one man or group can own the total supply and withhold part of it from the market. Each man owns himself.

Let us call the total supply of a monopolist's product P. When he withholds W units in order to obtain a monopoly for $P - W$, the increased revenue he obtains from $P - W$ must more than compensate him for the loss of revenue he suffers from not selling

W. A monopolist's action is always limited by loss of revenue from the withheld supply. But in the case of labor unions, this limitation does not apply. Since each man owns himself, the "withheld" suppliers are *different people* from the ones getting the increased income. If a union, in one way or another, achieves a higher price than its members could command by individual sales, its action is *not* checked by the loss of revenue suffered by the "withheld" laborers. If a union achieves a higher wage, some laborers are earning a higher price, while others are excluded from the market and lose the revenue they would have obtained. Such a higher price (wage) is called a *restrictionist price.*

A restrictionist price, by any sensible criterion, is "worse" than a "monopoly price." Since the restrictionist union does not have to worry about the laborers who are excluded and suffers no revenue loss from such exclusion, restrictionist action is not curbed by the elasticity of the demand curve for labor. For unions need only maximize the net income of the *working* members, or, indeed, of the union bureaucracy itself.[59]

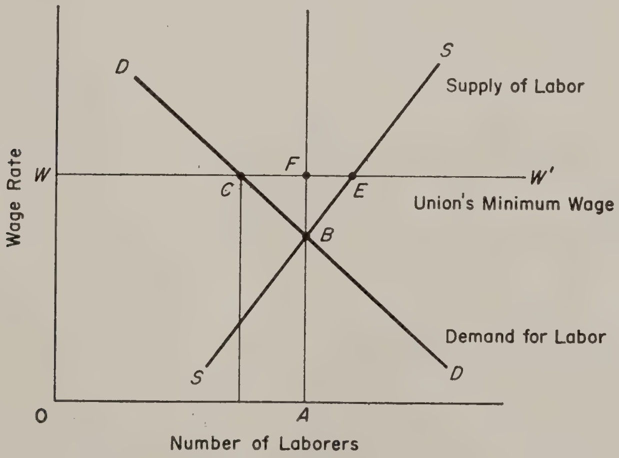


FIG. 69. FORMATION OF A RESTRICTIONIST WAGE RATE

How may a union achieve a restrictionist price? Fig. 69 will illustrate. The demand curve is the demand curve for a labor factor in an industry. *DD* is the demand curve for the labor in the industry; *SS*, the supply curve. Both curves relate the number of laborers on the horizontal axis and the wage rate on the vertical. At the market equilibrium, the supply of laborers offering their work in the industry will intersect the demand for the labor, at number of laborers *OA* and wage rate *AB*. Now, suppose that a union enters this labor market, and the union decides that its members will insist on a higher wage than *AB*, say *OW*. What unions do, in fact, is to insist upon a certain wage rate as a minimum below which they will not work in that industry.

The effect of the union decision is to shift the supply curve of labor available to the industry to a horizontal one at the wage rate *WW′*, rising after it joins the *SS* curve at *E*. The minimum reserve price of labor for this industry has risen, and has risen for all laborers, so that there are no longer laborers with lower reserve prices who would be willing to work for less. With a supply curve changing to *WE*, the new equilibrium point will be *C* instead of *B*. The number of workers hired will be *WC*, and the wage rate *OW*.

The union has thus achieved a restrictionist wage rate. It can be achieved regardless of the shape of the demand curve, granting only that it is falling. The demand curve falls because of the diminishing DMVP of a factor and the diminishing marginal utility of the product. But a sacrifice has been made—specifically, there are now fewer workers hired, by an amount *CF*. *What happens to them?* These discharged workers are the main losers in this procedure. Since the union represents the remaining workers, it does not have to concern itself, as the monopolist would, with the fate of these workers. At best, they must shift (being a nonspecific factor, they can do so) to some other—nonunionized—industry. The trouble is, however, that the workers are less suited to the new industry. Their having been in the now unionized industry implies that their DMVP in that industry was higher than in the industry to which they must shift; consequently, their wage rate is now lower. Moreover, their entry into the other industry depresses the wage rates of the workers already there.

Consequently, at best, a union can achieve a higher, restrictionist wage rate for its members only at the expense of lower ing the wage rates of all other workers in the economy. Production efforts in the economy are also distorted. But, in addition, the wider the scope of union activity and restrictionism in the economy, the more difficult it will be for workers to shift their locations and occupations to find nonunionized havens in which to work. And more and more the tendency will be for the displaced workers to remain permanently or quasi-permanently unemployed, eager to work but unable to find nonrestricted opportunities for employment. The greater the scope of unionism, the more a permanent mass of unemployment will tend to develop.

Unions try as hard as they can to plug all the "loop-holes" of nonunionism, to close all the escape hatches where the dispossessed workmen can find jobs. This is termed "ending the unfair competition of nonunion, low-wage labor." A universal union control and restrictionism would mean permanent mass unemployment, growing ever greater in proportion to the degree that the union exacted its restrictions.

It is a common myth that only the old-style "craft" unions, which deliberately restrict their occupational group to highly skilled trades with relatively few numbers, can restrict the supply of labor. They often maintain stringent standards of membership and numerous devices to cut down the supply of labor entering the trade. This direct restriction of supply doubtless makes it easier to obtain higher wage rates for the remaining workers. But it is highly misleading to believe that the newer-style "industrial" unions do not restrict supply. The fact that they welcome as many members in an industry as possible cloaks their restrictionist policy. The crucial point is that the unions insist on a minimum wage rate higher than what would be achieved for the given labor factor without the union. By doing so, as we saw in Fig. 69, they necessarily cut the number of men whom the employer can hire. *Ergo,* the consequence of their policy is to restrict the supply of labor, while at the same time they can piously maintain that they are inclusive and democratic, in contrast to the snobbish "aristocrats" of craft unionism.

In fact, the consequences of industrial unionism are more devastating than those of craft unionism. For the craft unions, being small in scope, displace and lower the wages of only a few workers. The industrial unions, larger and more inclusive, depress wages and displace workers on a large scale and, what is even more important, can cause permanent mass unemployment.[60]

There is another reason why an openly restrictionist union will cause less unemployment than a more liberal one. For the union which restricts its membership serves open warning on workers hoping to enter the industry that they are barred from joining the union. As a result, they will swiftly look elsewhere, where jobs can be found. Suppose the union is democratic, however, and open to all. Then, its activities can be described by the above figure; it has achieved a higher wage rate *OW* for its working members. But such a wage rate, as can be seen on the *SS* curve, attracts more workers into the industry. In other words, while *OA* workers were hired by the industry at the previous (non-union) wage *AB,* now the union has won a wage *OW*. At this wage, only *WC* workers can be employed in the industry. But this wage also *attracts more* workers than before, namely *WE*. As a result, instead of only *CF* workers becoming unemployed from the union's restrictionist wage rate, more—*CE*—will be unemployed in the industry.

Thus, an open union does not have the one virtue of the closed union—rapid repulsion of the displaced workers from the unionized industry. Instead, it attracts even more workers *into* the industry, thus aggravating and swelling the amount of unemployment. With market signals distorted, it will take a much longer time for workers to realize that no jobs are available in the industry. The larger the scope of open unions in the economy, and the greater the differential between their restrictionist wage rates and the market wage rates, the more dangerous will the unemployment problem become.

The unemployment and the misemployment of labor, caused by restrictionist wage rates need not always be directly visible. Thus, an industry might be particularly profitable and prosperous, either as a result of a rise in consumer demand for the product or from a cost-lowering innovation in the productive process.

In the absence of unions, the industry would expand and hire more workers in response to the new market conditions. But if a union imposes a restrictionist wage rate, it may not cause the unemployment of any current workers in the industry; it may, instead, simply prevent the industry from expanding in response to the requirements of consumer demand and the conditions of the market. Here, in short, the union destroys *potential* jobs in the making and imposes a misallocation of production by preventing expansion. It is true that, without the union, the industry will bid up wage rates *in the process* of expansion; but if unions impose a higher wage rate at the beginning, the expansion will not occur.[61]

Some opponents of unionism go to the extreme of maintaining that unions can *never* be free-market phenomena and are always "monopolistic" or coercive institutions. Although this might be true in actual practice, it is not *necessarily* true. It is very possible that labor unions might arise on the free market and even gain restrictionist wage rates.

How can unions achieve restrictionist wage rates on the free market? The answer can be found by considering the displaced workers. They key problem is: Why do the workers *let themselves* be displaced by the union's *WW* minimum? Since they were willing to work for less before, why do they now meekly agree to being fired and looking for a poorer-paying job? Why do some remain content to continue in a quasi-permanent pocket of unemployment in an industry, waiting to be hired at the excessively high rate? The only answer, in the absence of coercion, is that they have adopted on a commandingly high place on their value scales the goal of *not undercutting union wage rates*. Unions, naturally, are most anxious to persuade workers, both union and nonunion, as well as the general public, to believe strongly in the sinfulness of undercutting union wage rates. This is shown most clearly in those situations where union members refuse to continue working for a firm at a wage rate below a certain minimum (or on other terms of employment). This situation is known as a *strike*. The most curious thing about a strike is that the unions have been able to spread the belief throughout society that the striking members are still "really" working for the company even when they are deliberately and proudly *refusing* to do so. The natural answer of the employer, of course, is to turn somewhere else and to hire laborers who *are* willing to work on the terms offered. Yet unions have been remarkably successful in spreading the idea through society that anyone who accepts such an offer—the "strikebreaker"—is the lowest form of human life.

To the extent, then, that nonunion workers feel ashamed or guilty about "strike-breaking" or other forms of undercutting union-proclaimed wage scales, the displaced or unemployed workers agree to their own fate. These workers, in effect, are being displaced to poorer and less satisfying jobs voluntarily and remain unemployed for long stretches of time *voluntarily*. It is voluntary because that is the consequence of their voluntary acceptance of the *mystique* of "not crossing the picket line" or of not being a strikebreaker.

The economist *qua* economist can have no quarrel with a man who voluntarily comes to the conclusion that it is more important to preserve union solidarity than to have a good job. But there is one thing an economist *can* do: he can point out to the worker the consequences of his voluntary decision. There are undoubtedly countless numbers of workers who do not realize that their refusal to cross a picket line, their "sticking to the union," may result in their losing their jobs and remaining unemployed. They do not realize this because to do so requires knowledge of a chain of praxeological reasoning (such as we have been following here). The consumer who purchases directly enjoyable services does not have to be enlightened by economists; he needs no lengthy chain of reasoning to know that his clothing or car or food is enjoyable or serviceable. He can see each perform its service before his eyes. Similarly, the capitalist-entrepreneur does not need the economist to tell him what acts will be profitable or unprofitable. He can see and test them by means of his profits or losses. But for a grasp of the consequences of acts of governmental intervention in the market or of union activity, knowledge of praxeology is requisite.[62]

Economics cannot itself decide on ethical judgments. But in order for anyone to make ethical judgments rationally, he must know the consequences of his various alternative courses of action. In questions of government intervention or union action, economics supplies the knowledge of these consequences. Knowledge of economics is therefore necessary, though not sufficient, for making a rational ethical judgment in these fields. As for unions, the consequences of their activity, when discovered (e.g., displacement or unemployment for oneself or others), will be considered unfortunate by most people. Therefore, it is certain that when knowledge of these consequences becomes widespread, far fewer people will be "prounion" or hostile to "nonunion" competitors.[63]

Such conclusions will be reinforced when people learn of another consequence of trade union activity: that a restrictionist wage raises costs of production for the firms in the industry. This means that the marginal firms in the industry—the ones whose entrepreneurs earn only a bare rent—will be driven out of business, for their costs have risen above their most profitable price on the market—the price that had *already* been attained. Their ejection from the market and the general rise of average costs in the industry signify a general fall in productivity and output, and hence a loss to the consumers.[64] Displacement and unemployment, of course, also impair the general standard of living of the consumers.

Unions have had other important economic consequences. Unions are not *producing* organizations; they do not work for capitalists to improve production.[65] Rather they attempt to persuade workers that they can better their lot at the expense of the employer. Consequently, they invariably attempt as much as possible to establish work rules that hinder management's directives. These work rules amount to preventing management from arranging workers and equipment as it sees fit. In other words, instead of agreeing to submit to the work orders of management in exchange for his pay, the worker now sets up not only minimum wages, but also work rules without which he refuses to work. The effect of these rules is to *lower the marginal produc-*

tivity of all union workers. The lowering of marginal value-product schedules has a twofold result: (1) it itself establishes a restrictionist wage scale with its various consequences, for the marginal value product has fallen while the union insists that the wage rate remain the same; (2) consumers lose by a general lowering of productivity and living standards. Restrictive work rules therefore also lower output. All this is perfectly consistent with a society of individual sovereignty, however, provided always that no force is employed by the union.

To advocate coercive abolition of these work rules would imply literal enslavement of the workers to the dictates of catallactic consumers. But, once again, it is certain that knowledge of these various consequences of union activity would greatly weaken the voluntary adherence of many workers and others to the *mystique* of unionism.[66]

Unions, therefore, are theoretically compatible with the existence of a purely free market. In actual fact, however, it is evident to any competent observer that unions acquire almost all their power through the wielding of force, specifically force against strikebreakers and against the property of employers. An implicit license to unions to commit violence against strikebreakers is practically universal. Police commonly either remain "neutral" when strikebreakers are molested or else blame the strikebreakers for "provoking" the attacks upon them. Certainly, few pretend that the institution of mass picketing by unions is simply a method of advertising the fact of a strike to anyone passing by. These matters, however, are empirical rather than theoretical questions. Theoretically, we may say that it is possible to have unions on a free market, although empirically we may question how great their scope would be.

Analytically, we can also say that when unions are permitted to resort to violence, the state or other enforcing agency has implicitly delegated this power to the unions. The unions, then, have become "private states."[67]

We have, in this section, investigated the consequences of unions' achieving restrictionist prices. This is not to imply, however, that unions *always* achieve such prices in collective bargaining. Indeed, because unions do not own workers and therefore do not sell their labor, the collective bargaining of unions is an artificial replacement for the smooth workings of "individual bargaining" on the labor market. Whereas wage rates on the non-union labor market will always tend toward equilibrium in a smooth and harmonious manner, its replacement by collective bargaining leaves the negotiators with little or no rudder, with little guidance on what the proper wage rates would be. Even with both sides trying to *find* the market rate, neither of the parties to the bargain could be sure that a given wage agreement is too high, too low, or approximately correct. Almost invariably, furthermore, the union is not *trying* to discover the market rate, but to impose various arbitrary "principles" of wage determination, such as "keeping up with the cost of living," a "living wage," the "going rate" for comparable labor in other firms or industries, an annual average "productivity" increase, "fair differentials," etc.[68]

B. SOME ARGUMENTS FOR UNIONS: A CRITIQUE

1) *Indeterminacy* [69]

A favorite reply of union advocates to the above analysis is this: "Oh, that is all very well, but you are overlooking the indeterminacy of wage rates. Wage rates are determined by marginal productivity in a *zone* rather than at a point; and within that zone unions have an opportunity to bargain collectively for increased wages without the admittedly unpleasant effects of unemployment or displacement of workers to poorer jobs." It is curious that many writers move smoothly through rigorous price analysis until they come to wage rates, when suddenly they lay heavy stress on indeterminacy, the huge zones within which the price makes no difference, etc.

In the first place, the scope of indeterminacy is very small in the modern world. We have seen above that, in a two-person barter situation, there is likely to be a large zone of indeterminacy between the buyer's maximum demand price and the seller's minimum supply price for a quantity of a good. Within this zone, we can only leave the determination of the price to bargaining. However, it is precisely the characteristic of an advanced monetary economy that these zones are ever and ever narrowed and lose their importance. The zone is only between the "marginal pairs" of buyers and sellers, *and this zone is constantly dwindling as the number of people and alternatives in the market increase.* Growing civilization, therefore, is always narrowing the importance of indeterminacies.

Secondly, there is no reason whatever why a zone of indeterminacy should be more important for the labor market than for the market for the price of any other good.

Thirdly, suppose that there *is* a zone of indeterminacy for a labor market, and let us assume that no union is present. This means that there is a certain zone, the length of which can be said to equal a zone of the discounted marginal value product of the factor. This, parenthetically, is far less likely than the existence of a zone for a consumers' good, since in the former case there is a specific amount, a DMVP, to be estimated. But the *maximum* of the supposed zone is the highest point at which the wage equals the DMVP. Now, competition among employers will tend to raise factor prices to precisely that height at which profits will be wiped out. In other words, wages will tend to be raised to the *maximum* of any zone of the DMVP.

Rather than wages being habitually at the bottom of a zone, presenting unions with a golden opportunity to raise wages to the top, the truth is quite the reverse. Assuming the highly unlikely case that any zone exists at all, wages will tend to be at the *top,* so that the only remaining indeterminacy is downward. Unions would have no room for increasing wages within that zone.

2) *Monopsony and Oligopsony*

It is often alleged that the buyers of labor—the employers—have some sort of monopoly and earn a monopoly gain, and that therefore there is room for unions to raise wage rates without injuring other laborers. However, such a "monopsony" for the purchase of labor would have to encompass all the entrepreneurs in the society. If it did not, then labor, a nonspecific factor, could move into other firms and other industries. And we have seen that one big cartel cannot exist on the market. Therefore, a "monopsony" cannot exist.

The "problem" of "oligopsony"—a "few" buyers of labor—is a pseudo problem. As long as there is no monopsony, competing employers will tend to drive up wage rates until they equal their DMVP's. The *number* of competitors is irrelevant; this depends on the concrete data of the market. Below, we shall see the fallacy of the idea of "monopolistic" or "imperfect" competition, of which this is an example. Briefly, the case of "oligopsony" rests on a distinction between the case of "pure" or "perfect" competition, in which there is an allegedly horizontal—infinitely elastic—supply curve of labor, and the supposedly less elastic supply curve of the "imperfect" oligopsony. Actually, since people do not move *en masse* and all at once, the supply curve is never infinitely elastic, and the distinction has no relevance. There is only free competition, and no other dichotomies, such as between pure competition and oligopsony, can be established. The shape of the supply curve, furthermore, makes no difference to the truth that labor or any other factor tends to get its DMVP on the market.

3) *Greater Efficiency and the "Ricardo Effect"*

One common prounion argument is that unions benefit the economy through forcing higher wages on the employers. At these higher wages the workers will become more efficient, and their marginal productivity will rise as a result. If this were true, however, no unions would be needed. Employers, ever eager for greater profits, would see this and pay higher wages now to reap the benefits of the allegedly higher productivity in the future. As a matter of fact, employers often train workers, paying higher wages than their *present* marginal product justifies, in order to reap the benefits of their increased productivity in later years.

A more sophisticated variant of this thesis was advanced by Ricardo and has been revived by Hayek. This doctrine holds that union-induced higher wage rates encourage employers to substitute machinery for labor. This added machinery increases the capital per worker and raises the marginal productivity of labor, thereby paying for the higher wage rates. The fallacy here is that only increased saving can make more capital available. Capital investment is limited by saving. Union wage increases do not increase the total supply of capital available. Therefore, there can be no general rise in labor productivity. Instead, the potential supply of capital is *shifted* (not increased) from other industries to those industries with higher wage rates. And it is shifted to industries where it would have been less profitable under nonunion conditions. The fact that an induced higher wage rate shifts capital to the industry does not indicate economic progress, but rather an attempt, never fully successful, to offset an economic retrogression—a higher cost in the manufacture of the product. Hence, the shift is "uneconomic."

A related thesis is that higher wage rates will spur employers to invent new technological methods to make labor more efficient. Here again, however, the supply of capital goods is limited by the savings available, and there is almost always a sheaf of technological opportunities awaiting more capital anyway. Furthermore, the spur of competition and the desire of the producer to keep and increase his custom is enough of an incentive to increase productivity in his firm, without the added burden of unionism.[70]

5. *The Theory of Monopolistic or Imperfect Competition*

A. MONOPOLISTIC COMPETITIVE PRICE

The theory of monopoly price has been generally superseded in the literature by the theories of "monopolistic" or "imperfect" competition.[71] As against the older theory, the latter have the advantage of setting up *identifiable* criteria for their categories—such as a perfectly elastic demand curve for pure competition. Unfortunately, these criteria turn out to be completely fallacious.

Essentially, the chief characteristic of the imperfect-competition theories is that they uphold as their "ideal" the state of "pure competition" rather than "competition" or "free competition." *Pure competition* is defined as that state in which the demand curve for each firm in the economy is *perfectly elastic,* i.e., the demand curve as presented to the firm is completely horizontal. In this supposedly pristine state of affairs, no one firm can, through its actions, possibly have any influence over the price of its product. Its price is then "set" for it by the market. Any amount it produces can and will be sold at this ruling price. In general, it is this state of affairs, or else this state without uncertainty ("perfect competition"), that has received most of the elaborate analysis in recent years. This is true both for those who believe that pure competition fairly well represents the real economy and for their opponents, who consider it only an ideal with which to contrast the actual "monopolistic" state of affairs. Both camps, however, join in upholding pure competition as the ideal system for the general welfare, in contrast to various vague "monopoloid" states that occur when there is departure from the purely competitive world.

The pure-competition theory, however, is an utterly fallacious one. It envisages an absurd state of affairs, never realizable in practice, and far from idyllic if it were. In the first place, there can be no such thing as a firm *without* influence on its price. The monopolistic-competition theorist contrasts this ideal firm with those firms that have some influence on the determination of price and are therefore in some degree "monopolistic." Yet it is obvious that the demand curve to a firm *cannot* be perfectly elastic throughout. At some points, it must dip downward, since the increase in supply will tend to lower market price. As a matter of fact, it is clear from our construction of the demand curve that there can be *no* stretch of the demand curve, however small, that is horizontal, although there can be small vertical stretches. In aggregating the market demand curve, we saw that for each hypothetical price, the consumers will decide to purchase a certain amount. If the producers attempt to sell a larger amount, they will have to conclude their sale at a lower price in order to attract an increased demand. Even a very small increase in supply will lead to a perhaps very small lowering of price. The individual firm, no matter how small, always has a perceptible influence on the total supply. In an industry of small wheat farms (the implicit model for "pure competition"), each small farm contributes a part of the total supply, and there can be no total without a contribution from each farm. Therefore, each farm has a perceptible, even if very small, influence. No perfectly elastic demand curve can, then, be postulated even in such a case. The error in believing in "perfect elasticity" stems from the use of such mathematical concepts as "second order of smalls," by which infinite negligibility of steps can be assumed. But economics analyzes real human action, and such real action must always be concerned with discrete, perceptible steps, and never with "infinitely small" steps.

Of course, the demand curve for each small wheat farm is likely to be very highly, *almost* perfectly, elastic. And yet the fact that it is *not* "perfect" destroys the entire concept of pure competition. For how does this situation differ from, say, the Hershey Chocolate Company if the demand curve for the latter firm is also elastic? Once it is conceded that all demand curves to firms must be falling, the monopolistic-competition theorist can make no further analytic distinctions.

We cannot compare or classify the curves on the basis of *degrees of elasticity,* since there is nothing in the Chamberlin-Robinson monopolistic-competition analysis, or in any part of praxeology for that matter, that permits us to do so, once the case of pure competition is rejected. For praxeology cannot establish *quantitative* laws, only *qualitative* ones. Indeed, the only recourse of monopolistic-competition theorists would be to fall back on the concepts of "inelastic" vs. "elastic" demand curves, and this would precisely plunge them right back into the old monopoly-price vs. competitive-price dichotomy. They would have to say, with the old monopoly-price theorists, that if the demand curve for the firm is more than unitarily elastic at the equilibrium point, the firm will remain at the "competitive" price; that if the curve is inelastic, it will rise to a monopoly-price position. But, as we have already seen in detail, the monopoly-competitive price dichotomy is untenable.

According to the monopolistic-competition theorists, the two influences sabotaging the possible existence of pure competition are "differentiation of product" and "oligopoly," or fewness of firms, where one firm influences the actions of others. As to the former, the producers are accused of creating an artificial differentiation among products in the mind of the public, thus carving out for themselves a portion of monopoly. And Chamberlin originally attempted to distinguish "groups" of producers selling "slightly" differentiated products from old-fashioned "industries" of firms making identical products. Neither of these attempts has any validity. If a producer is making a product different from that of another producer, then he is an unique "industry"; there is no rational basis for any grouping of varied producers, particularly in aggregating their demand curves. Furthermore, the consuming public decides on the differentiation of products on its value scales. There is nothing "artificial" about the differentiation, and indeed this differentiation serves to cater more closely to the multifarious wants of the consumers.[72] It is clear, of course, that Ford has a monopoly on the sale of Ford cars; but this is a full "monopoly" rather than a "monopolistic" tendency. Also, it is difficult to see what difference can come from the number of firms that are producing the same product, particularly once we discard the myth of pure competition and perfect elasticity. Much ado indeed has been made about strategies, "warfare," etc., between oligopolists, but there is little point to such discussions. Either the firms are independent and therefore competing, or they are acting jointly and therefore cartelizing. There is no third alternative.

Once the perfect-elasticity myth has been discarded, it becomes clear that all the tedious discussion about the number and size of firms and groups and differentiation, etc., becomes irrelevant. It becomes relevant only for economic history, and not for economic analysis.

It might be objected that there is a substantial problem of oligopoly: that, under oligopoly, each firm has to take into account the reactions of competing firms, whereas under pure competition or differentiated products without oligopoly, each firm can operate in the blissful awareness that no competitor will take account of its actions or change its actions accordingly. Hiram Jones, the small wheat farmer, can set his production policy without wondering what Ezra Smith will do when he discovers what Jones' policy is. Ford, on the other hand, must consider General Motors' reactions, and *vice versa*. Many writers, in fact, have gone so far as to maintain that economics can simply not be applied to these "oligopoly" situations, that these are indeterminate situations where "anything may happen." They define the buyers' demand curve that presents itself to the firm as *assuming no reaction* by competing firms. Then, since "few firms" exist and each firm takes account of the reactions of others, they proceed to the conclusion that in the real world all is chaos, incomprehensible to economic analysis.

These alleged difficulties are nonexistent, however. There is no reason why the demand curve to a firm cannot *include* expected reactions by other firms.[73] The demand curve to a firm is the set of a firm's expectations, at any time, of how many units of its product consumers will buy at an alternative series of prices. What interests the producer is the hypothetical set of consumer demands at each price. He is not interested in what consumer demand will be in various sets of nonexistent situations. His expectations will be based on his judgment of what would actually happen should he charge various alternative prices. If his rivals will react in a certain way to his charging a higher or a lower price, then it is each firm's business to *forecast and take account of this reaction* in so far as it will affect buyers' demand for its particular product. There would be little sense in ignoring such reactions if they were relevant to the demand for its product or in including them if they were not. A firm's estimated demand curve, therefore, *already includes* any expected reactions of rivals.

The relevant consideration is not the fewness of the firms or the state of hostility or friendship existing among firms. Those writers who discuss oligopoly in terms applicable to games of poker or to military warfare are entirely in error. The fundamental business of production is service to the consumers for monetary gain, and not some sort of "game" or "warfare" or any other sort of struggle *between* producers. In "oligopoly," where several firms are producing an identical product, there cannot persist any situation in which one firm charges a higher price than another, since there is always a tendency toward the formation of a uniform price for each uniform product. Whenever firm A attempts to sell its product higher or lower than the previously ruling market price, it is attempting to "discover the market," to find out what the equilibrium market price is, in accordance with the present state of consumer demand. If, at a certain price for the product, consumer demand is in excess of supply, the firms will tend to raise the price, and *vice versa* if the produced stock is not being sold. In this familiar pathway to equilibrium, all the stock that the firms wish to sell "clears the market" at the highest price that can be obtained. The jockeying and raising and lowering of prices that takes place in "oligopolistic" industries is not some mysterious form of warfare, but the visible process of attempting to find market equilibrium—that price at which the quantity supplied and the quantity demanded will be equal. The same process, indeed, takes place in any market, such as the "nonoligopolistic" wheat or strawberry markets. In the latter markets the process seems to the viewer more "impersonal," because the actions of any one individual or firm are not as important or as strikingly visible as in the more "oligopolistic" industries. But the process is essentially the same, and we must not be led to think differently by such often inapt metaphors as the "automatic mechanisms of the market" or the "soulless, impersonal forces on the market." All action on the market is necessarily *personal;* machines may move, but they do not purposefully *act*. And, in oligopoly situations, the rivalries, the feelings of one producer toward his competitors, may be historically dramatic, but they are unimportant for economic analysis.

To those who are still tempted to make the number of producers in any field the test of competitive merit, we might ask (setting aside the problem of proving homogeneity): How can the market create sufficient numbers? If Crusoe exchanges fish for Friday's lumber on their desert island, are they both benefiting, or are they "bilateral monopolists" exploiting each other and charging each other monopoly prices? But if the State is not justified in marching in to arrest Crusoe and/or Friday, how can it be justified in coercing a market where there are obviously many *more* competitors?

Economic analysis, in conclusion, fails to establish any criterion for separating any elements of the free-market price for a product. Such questions as the number of firms in an industry, the sizes of the firms, the type of product each firm makes, the personalities or motives of the entrepreneurs, the location of plants, etc., are entirely determined by the concrete conditions and data of the particular case. Economic analysis can have nothing to say about them.[74]

B. THE PARADOX OF EXCESS CAPACITY

Perhaps the most important conclusion of the theory of monopolistic or imperfect competition is that the real world of monopolistic competition (where the demand curve to each firm is necessarily falling) is inferior to the ideal world of pure competition (where no firm can affect its price). This conclusion was expressed simply and effectively by comparing two final equilibrium states: under conditions of pure and monopolistic competition (Fig. 70).

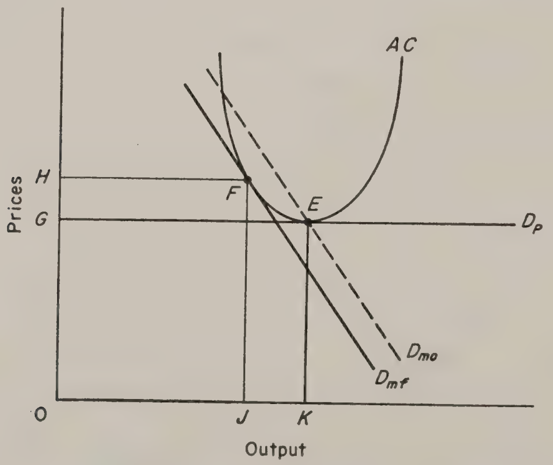


FIG. 70. FINAL EQUILIBRIUM STATES UNDER CONDITIONS OF PURE AND MONOPOLISTIC COMPETITION

AC is a firm's average total-cost curve—its alternative dollar costs per unit—with output on the horizontal axis and prices (including costs) on the vertical axis. The only assumption we need in drawing the average-cost curve is that, for any plant in any branch of production, there will be *some optimum* point of production, i.e., some level of output at which average unit cost is at a minimum. All levels of production lower or higher than the optimum have a higher average cost. In pure competition, where the demand curve for any firm is perfectly elastic, D_p, each firm will eventually adjust so that its *AC* curve will be tangent to D_p, in equilibrium; in this case, at point *E*. For if average revenue (price) is greater than average cost, then competition will draw in other firms, until the curves are tangent; if the cost curve is irretrievably higher than demand, the firm will go out of business. Tangency is at point *E,* price at *OG,* and output at *OK*. As in any definition of final equilibrium, total costs equal total revenues for each firm, and profits are zero.

Now contrast this picture with that of monopolistic competition. Since the demand curve (D_{mf}) is now sloping downward to the right, it must, given the same *AC* curve, be tangent at some point (*F*), where the price is higher (*JF*) and the production lower (*OJ*) than under pure competition. In short, monopolistic competition yields higher prices and less production—i.e., a lower standard of living—than pure competition. Furthermore, output will not take place at the point of minimum average cost—clearly a social "optimum," and each plant will produce at a lower than optimum level, i.e., it will have "excess capacity." This was the "welfare" case of the monopolistic-competition theorists.

By a process of revision in recent years, some of it by the originators of the doctrine themselves, this theory has been effectively riddled beyond repair. As we have seen, Chamberlin and others have shown that this analysis does not apply if we are to take consumer desire for diversity as a good to be satisfied.[75] Many other effective and sound attacks have been made from different directions. One basic argument is that the situations of pure and of monopolistic competition cannot be compared because the *AC* curves *would not,* in fact, be the same. Chamberlin has pursued his revisionism in this realm also, declaring that the comparisons are wholly illegitimate, that to apply the concept of pure competition to existing firms would mean, for example, assuming a very large number of similar firms producing the identical product. If this were done, say, with General Motors, it would mean that *either* GM must conceptually be divided up into numerous fragments, or else that it be multiplied. If divided, then unit costs would undoubtedly be higher, and then the "competitive firm" would suffer higher costs and have to subsist on higher prices. This would clearly injure consumers and the standard of living; thus, Chamberlin follows Schumpeter's criticism that the "monopolistic" firm may well have and probably will have lower costs than its "purely competitive" counterpart. If, on the other hand, we conceive of the multiplication of a very large number of General Motors corporations at existing size, we cannot possibly relate it to the present world, and the whole comparison becomes absurd.[76]

In addition, Schumpeter has stressed the superiority of the "monopolistic" firm for innovation and progress, and Clark has shown the inapplicability, in various ways, of this static theory to the dynamic real world. He has recently shown its fallacious asymmetry of argument with respect to price and quality. Hayek and Lachmann have also pointed out the distortion of dynamic reality, as we have indicated above.[77]

A second major line of attack has shown that the comparisons are much less important than they seem from conventional diagrams, because cost curves are empirically much flatter than they appear in the textbooks. Clark has emphasized that firms deal in *long-run* considerations, and that long-run cost and demand curves are both more elastic than short-run; hence the differences between *E* and *F* points will be negligible and may be nonexistent. Clark and others have stressed the vital importance of *potential* competition to any would-be reaper of monopoly price, from firms both within and without the industry, and also the competition of substitutes between industries. A further argument has been that the cost curves, empirically, are flat within the relevant range, even aside from the long- vs. short-run problems.[78]

All these arguments, added to our own analysis given above, have effectively demolished the theory of monopolistic competition, and yet more remains to be said. There is something very peculiar about the entire construction, even on its own terms, aside from the fallacious "cost-curve" approach, and practically no one has pointed out these other grave defects in the theory. In an economy that is almost altogether "monopolistically competitive," how can *every* firm produce too little and charge too much? What happens to the surplus factors? What are they doing? The failure to raise this question stems from the modern neglect of Austrian general analysis and from undue concentration on an isolated firm or industry.[79] The excess factors must go somewhere, and in that case must they not go to other monopolistically competive firms? In which case, the thesis breaks down as self-contradictory. But the proponents have prepared a way out. They take, first, the case of pure competition, with equilibrium at point *E*. Then, they assume a sudden shift to conditions of monopolistic competition, with the demand curve for the firm now sloping downward. The demand curve now shifts from D_p to D_{mo}. Then the firm restricts production and raises its price accordingly, reaps profits, attracts new firms entering the industry, the new competition reduces the output salable by each firm, and the demand curve shifts downward and to the left until it is tangent to the *AC* curve at point *F*. Hence, say the monopolistic-competition theorists, not only does monopolistic competition suffer from too little production in each firm and excessive costs and prices; it also suffers from *too many firms* in each industry. Here is what has happened to the excess factors: they are trapped in too many uneconomic firms.

This seems plausible, until we realize that the whole example has been constructed as a trick. If we isolate a firm or an industry, as does the example, we may just as well start from a position of monopolistic competition, at point *F,* and then suddenly shift to conditions of pure competition. This is certainly just as legitimate, or rather illegitimate, a base for comparison. What then? As we see in the next diagram, Fig. 71, the demand curve for each firm is now shifted from D_{mf} to D_{po}. It will now be profitable for each firm to expand its output, and it will then make profits. New firms will then be attracted into the industry, and the demand curve will fall vertically, until it again reaches tangency with the *AC* curve at point *E*. Are we now "proving" that there are *more* firms in an industry under *pure* than under monopolistic competition?[80] The fundamental error here is failure to see that, under the conditions established by the assumptions, *any* change opening up profits will bring new firms into an industry.

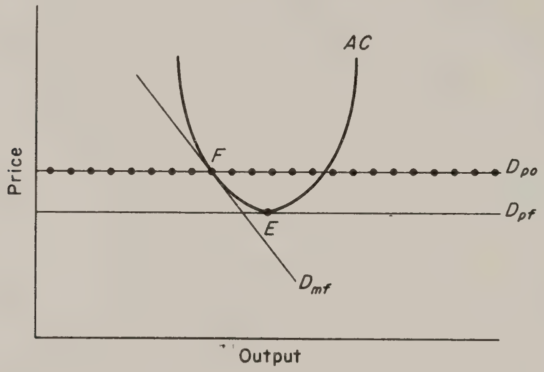


Fig. 71. Consequence of a Shift from Monopolistic to Pure Competition

Yet the theorists are supposed to be comparing two different static equilibria, of pure and of monopolistic competition, and not discussing paths from one to the other. Thus, the monopolistic-competition theorists have by no means solved their problem of surplus factors.

But, aside from this point, there are more difficulties in the theory, and Sir Roy Harrod, himself one of its originators, is the only one to have seized the essence of the remaining central difficulty. As Harrod says:

> If the entrepreneur foresees the trend of events, which will in due course limit his profitable output to x – y units, why not plan to have a plant that will produce x – y units most cheaply, rather than encumber himself with excess capacity? To plan a plant for producing x units, while knowing that it will only be possible to maintain an output of x – y units, is surely to suffer from schizophrenia.

And yet, asserts Harrod puzzledly, the "accepted doctrine" apparently deems it "impossible to be an entrepreneur and not suffer from schizophrenia!"[81] In short, the theory assumes that, in the long run, a firm having to produce at *F* will yet construct a plant with minimum costs at point *E*. Clearly, here is a patent contradiction with reality. What is wrong? Harrod's own answer is an excellent and novel discussion of the difference between long-run and short-run demand curves, with the "long run" always being a factor in entrepreneurial planning, but he does not precisely answer this question.

The paradox becomes "curiouser and curiouser" when we fully realize that it all hinges on a mathematical technicality. The reason why a firm can never produce at an optimum cost point is that (*a*) it must produce at a tangent of demand and average-cost curves in equilibrium, and (*b*) if the demand curve is falling, it follows that it can be tangent to a U-shaped cost curve only at some point higher than, and to the left of, the trough point. There are two considerations that we may now add. First, there is no reason why the cost "curve" should, in fact, be curved. In an older day, textbook demand curves used to be curves, and now they are often straight lines; there is even more reason for believing that cost curves are a series of angular lines. It is of course (*a*) more convenient for diagrams, and (*b*) essential to mathematical representation, for there to be continuous curves, but we must never let reality be falsified in order to fit the niceties of mathematics. In fact, production is a series of discrete alternatives, as all human action is discrete, and cannot be smoothly continuous, i.e., move in infinitely small steps from one production level to another. But once we recognize the discrete, angular nature of the cost curve, the "problem" of excess capacity immediately disappears (Fig. 72). Thus the falling demand curve to the "monopolistic" firm, D_m, can now be "tangent" to the *AC* curve at *E*, the minimum-cost point, and will be so in final equilibrium.

There is another way for this pseudo problem to disappear, and that is to call into question the entire assumption of tangency. The tangency of average cost and demand at equilibrium has appeared to follow from the property of equilibrium: that total costs and total revenues of the firm will be equal, since profits as well as losses will be zero. But a key question has been either overlooked or wrongly handled. Why should the firm produce *anything,* after all, if it earns nothing from doing so? But it will earn something, in equilibrium, and that will be *interest* return. Modern orthodoxy has fallen into this error, for one reason: because it does not realize that entrepreneurs are also capitalists and that even if, in an evenly rotating economy, the strictly entrepreneurial function were no longer to be required, the capital-advancing function would still be emphatically necessary.

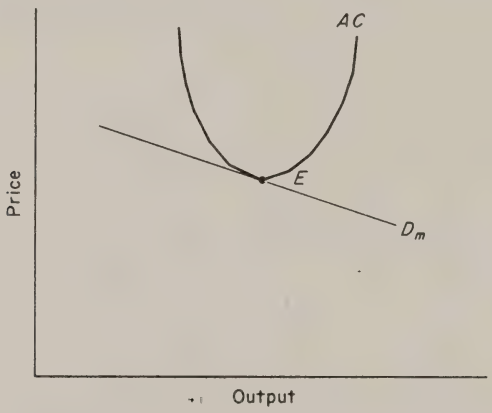


FIG. 72. DETERMINATION OF PRICE AT POINT OF MINIMUM COST

Modern theory also tends to view interest return as a *cost* to the firm. Naturally, if this is done, then the presence of interest does not change matters. But (and here we refer the reader to foregoing chapters) interest is *not* a cost to the firm; it is an earning *by* a firm. The contrary belief rests on a superficial concentration on loan interest and on an unwarranted separation between entrepreneurs and capitalists. Actually, loans are unimportant and are only another legal form of entrepreneurial-capitalist investment. In short, in the evenly rotating economy, the *firm* earns a "natural" interest return, dictated by social time preference. Hence, Fig. 72 must be altered to look like the diagram in Fig. 73 (setting aside the problem of curves vs. angles). The firm will produce *OK,* its optimum production level, at minimum average cost, *KE.* Its demand curve and cost curve will *not* be tangent to each other, but will allow room for equilibrium interest return, represented by the area *EFGH.* (Neither, as some may object, will the price be higher in this corrected version of monopolistic competition; for this *AC* curve is lower all around than the previous ones, which had included interest return in costs. If they did not include interest, and instead assumed that interest would be zero in the ERE, then they were wrong, as we have pointed out above.)[82] And so the paradox of the monopolistic-competition theory is finally and fully interred.[83]

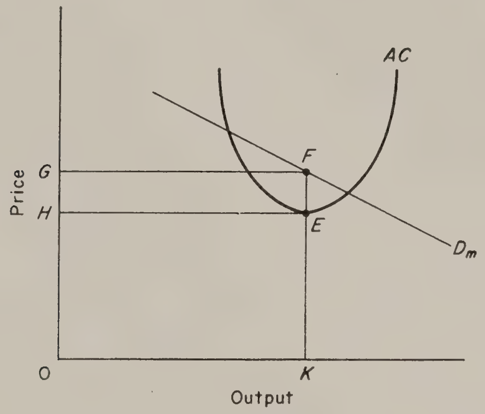


FIG. 73. EQUILIBRIUM INTEREST RETURN AS A COMPONENT OF PRICE

C. CHAMBERLIN AND SELLING COST

One of Professor Chamberlin's most important contributions is alleged to have been his sharp distinction between "selling cost" and "production cost."[84] "Production costs" are supposed to be the legitimate expenses needed to increase supply in order to meet *given* consumer demand schedules. "Selling costs," on the other hand, are supposed to be directed toward influencing consumers and *increasing* their demand schedules for the firm's product.

This distinction is completely spurious.[85] Why does a businessman invest money and incur *any* costs whatever? To supply a hoped-for demand for his product. Every time he improves his product he is hoping that consumers will respond by increasing their demands. In fact, *all* costs expended on raw materials are incurred in an attempt to increase consumer demand beyond what it would have been in the absence of these costs. *Therefore, every production cost is also a "selling cost."*

Conversely, selling costs are not the sheer waste or even tyranny that monopolistic-competition theorists have usually assumed. The various expenses designated as "selling costs" perform definite services for the public. Basically, they furnish information to the public about the goods of the seller. We live in a world where there can be no "perfect knowledge" of products by anyone—especially consumers, who are faced with a myriad of available products. Selling costs are therefore important in providing information about the product as well as about the firm. In some cases, e.g., displays, the "selling cost" itself *directly* improves the quality of the product in the mind of the consumer. It must always be remembered that the consumer is not simply buying a *physical product;* he may also be buying "atmosphere," prestige, service, etc., all of which have tangible reality to him and are valued accordingly.[86]

The view that a selling cost is somehow an artifact of "monopolistic competition" stems only from the peculiar assumptions of "pure competition." In the "ideal" world of pure competition, we remember, each firm's demand is *given* to it as infinitely elastic, so that it can sell whatever it wants at the ruling price. Naturally, in such a situation, no selling costs are necessary, because a market for a product is automatically assured. In the real world, however, there is no perfect knowledge, and the demand curves are neither given nor infinitely elastic.[87] Therefore, firms have to try to increase demands for their products and to carve out market areas for themselves.

Chamberlin falls into another error in implying that selling costs, such as advertising, "create" consumer demands. This is the determinist fallacy. Every man as a self-owner freely decides his own scale of valuations. On the free market no one can force another to choose his product. And no other individual can ever "create" someone's values for him; he must adopt the value himself.[88]

6. *Multiform Prices and Monopoly*

Up to this point we have always concluded that the market tends, at any given time, to establish *one uniform market price* for any good, under competitive or monopoly conditions. One phenomenon that sometimes appears, however, is persistent *multiformity* of prices. (We must consider, of course, a good that is really homogeneous; otherwise, there would merely be price differences for different goods.) How, then, can multiformity come about, and does it in some sense violate the workings or the ethics of a free-market society?

We must first separate goods into two kinds: those that are *resalable* and those that are not. Under the latter category come all intangible services, which are either consumed directly or used up in the process of production; in any case, they themselves cannot be resold by the first buyer. Nonresalable services also include the *rental* use of a tangible good, for then the good itself is not being bought, but rather its unit services over a period of time. An example may be the "renting" of space in a freight car.

Let us first take resalable goods. When can there be persistent multiform pricing of such goods? One necessary condition is clearly *ignorance* on the part of some seller or buyer. The market price for a certain kind of steel, for example, may be one gold ounce per ton; but one seller, out of pure ignorance, may persist in selling it for half a gold ounce per ton. What will happen? In the first place, some enterprising person will buy the steel from this laggard and resell it at the market price, thus establishing effective uniformity. Secondly, other buyers will rush to outbid the first buyer for the bargain, thus informing the seller of his underpricing. Finally, the persistently ignorant seller will not long remain in business. (Of course, it may happen that the seller may have a strong desire to sell steel for lower than market price, for "philanthropic" reasons. But if he persists in doing so, then he is simply purchasing the consumers' good—to him—of philanthropy and paying the price for it in lower revenue. He is here acting as a consumer rather than as an entrepreneur, just as he would if he hired his ne'er-do-well nephew at the expense of a cut in profits. This, then, would not be a genuine case of multiform pricing, where the good must *always* be homogeneous.)

Nor is the buyer in a different condition. If a buyer were ignorant and continued to buy steel at two gold ounces a ton when the market price was one gold ounce, then some other seller would soon apprise the buyer of his error by offering to sell him the steel for much less. If there is only one seller, then the cheaper buyer can still resell at a profit to the buyer charged a higher price. And a persistently ignorant buyer will also go out of business.

There is only one case where a multiform price could possibly be established for a resalable good: where the good is being sold to consumers—the ultimate buyers. For while entrepreneurial buyers will be alert to price differentials, and a buyer of a good at a lower price can resell to another buyer charged a higher price, ultimate consumers do not usually consider reselling once they buy. A classic case is that of American tourists at a Middle Eastern bazaar.[89] The tourist has neither the time nor the inclination to make a thorough study of the consumer markets, and therefore each tourist is ignorant of the going price of any good. Hence, the seller can isolate each buyer, charging highest prices to the most eager buyers, less high prices to the next most eager, and much lower prices to the marginal buyers, of the same good. In that way the seller achieves a generally unfulfilled objective of all sellers: the tapping of more of the "consumers' surplus" of the buyers. Here the two conditions are fulfilled: the consumers are ignorant of the going price and are not in the market to resell.

Does multiform pricing, as has often been charged, distort the structure of production, and is it in some way immoral or exploitative? How is it immoral? The seller aims, as always, to maximize his earnings in voluntary exchange, and he certainly cannot be held responsible for the ignorance of the buyer. If buyers do not take the trouble to inform themselves of the state of the market, they must stand prepared to have some of their psychic surplus tapped by the bargaining of the seller. Neither is this action irrational on the part of the buyer. For we must deduce from the buyers' action that *he prefers to remain in ignorance rather than to make the effort or pay the money to inform himself of market conditions.* To acquire knowledge of any field takes time, effort, and often money, and it is perfectly reasonable for an individual on any given market to prefer to take his chances on the price and use his scarce resources in other directions. This choice is crystal clear in the case of a tourist on holiday, but it is also possible in any other given market. Both the impatient tourist, who prefers to pay a higher price and not spend time and money on learning about the market, and a companion who spends days on an intensive study of the bazaar market are exercising their preferences, and praxeology cannot call one or the other more rational. Furthermore, there is no way to measure the consumer surpluses lost or gained in the case of the two tourists. We must therefore conclude that multiform pricing, in the case of resalable goods, does not at all distort the allocation of productive factors, because, on the contrary, it is consistent with, and in the case of the tourist, the *only* pricing consistent with, the satisfaction of consumer preferences.

It must be emphasized here that no matter how much the seller at the bazaar taps of his customers' psychic surplus, he does not tap it *all;* otherwise the sale would not be made at all. Since the exchange is voluntary, both parties still benefit from making it.

What if the good is *not* resalable? In that case, there is far greater room for multiform pricing, since ignorance is not required. A vendor can sell an intangible service at a higher price to A than to B without fear that B can undercut him by reselling to A. Hence, most actual cases of multiform pricing take place in the realm of intangible goods.

Suppose now that seller X has managed to establish multiform prices for his customers. He might be a lawyer, for example, who charges higher fees for the same service to a wealthy than to a poor client. Since there is still competition among sellers, why does another lawyer Y not enter the field and undercut X's price to the wealthy clients? In fact, this is what will generally happen, and any attempt to establish "separate markets" among customers will lead to an invasion of the more profitable, higher-price field by other competitors, finally driving the price down, reducing revenues, and re-establishing uniform pricing. If a seller's service is unusual and it is universally recognized that he has no effective competitors, then he might be able to sustain a multiform structure.

There is one simple but very important condition that we have not mentioned which must be fulfilled to establish multiform pricing: the total proceeds from multiformity must be greater than from uniformity. Where one buyer can buy only one unit of a good, this is no problem. If there is and can be only one seller of a nonresalable good, *and* each buyer can buy no more than one unit, then multiform pricing will tend to be established (barring undercutting by competitors), since the total revenue to the seller will always be greater through tapping more of the consumer surpluses of each buyer.[90] But if a buyer can buy more than one unit, revenue becomes a problem. For then each buyer, confronted with a higher price, will restrict his purchases. This will leave an unsold stock, which the seller will then unload by *lowering* his prices below the hypothetical uniform price in order to tap the demands of hitherto submarginal buyers. Thus, suppose that the uniform price of a good is ten gold grains per unit, at which a hundred units are sold. The seller now decides to isolate each buyer as a separate market and tap more consumer surpluses. Aside from the barely marginal buyers, then, all the others will find their prices raised. They will restrict their purchases, say to an aggregate of eighty-five units, and the other fifteen units will be sold by lowering the price to new, hitherto submarginal buyers.

Multiformity can be established only when total proceeds are greater than uniformity provides. This is by no means always the case, for the supramarginal buyers may restrict their purchases by more than the submarginal buyers can compensate.[91]

Multiform pricing has been accorded a curious reception by economists and laymen. In some cases it is deemed vicious exploitation of the consumers; in others (e.g., medicine and education) it is considered praiseworthy and humanitarian. In reality, it is neither. It is certainly not the *rule* in pricing that the most eager *should* pay in proportion to their eagerness (in practice, usually gauged by their wealth), for then everyone would pay in proportion to his wealth for everything, and the entire monetary and economic system would break down; money would no longer function. (See chapter 12 below.) If this is clear in general, it is difficult to see a priori why specific goods should be singled out for this treatment. On the other hand, the consumers are not being "exploited" if there is multiformity. It is clear that the marginal and submarginal buyers are not exploited: the latter obviously gain. What of the *supra*marginal buyers who are receiving less consumer surplus? In some cases, they gain, because without the greater revenues provided by "price discrimination" the good would not be supplied at all. Consider, for example, a country doctor who would leave the area if he had to subsist on the lower revenues provided by uniformity. And even if the good were still supplied, *the fact* that the supramarginal buyers continue to patronize the seller at all shows that they are content with the seemingly discriminatory arrangement. Otherwise, they would quickly boycott the seller, either individually or in concert, and patronize competitors. They would simply refuse to pay more than the submarginal buyers, and this would quickly induce the seller to lower his prices. The fact that they do not do so shows that they *prefer* multiformity to uniformity in the particular case. An example is private school education, which able but poor youths may often attend on scholarships—a principle that the wealthy parents who pay full tuition demonstrably do not consider unjust. If, however, the sellers have received grants of monopolistic privilege by the government, enabling them to restrict competition in the serving of the supramarginal buyers, then they may establish multiformity without enjoying the demonstrable preference of these buyers: for here governmental coercion has entered to inhibit the free expression of preferences.[92]

So far we have discussed price discrimination by sellers in consumers' markets, where consumer surpluses are tapped. Can there be such discrimination in producers' markets? Only when the good is not resalable, total proceeds are greater under multiformity, *and* the supramarginal buyers are willing to pay. The latter will happen when these buyers have a higher DMVP for the good in their firms than other buyers have in theirs. In this case, the seller of the good with multiform prices is absorbing a rent formerly earned by the supramarginal buying firm. The most notable case of such pricing has been railroad freight "discrimination against" the firms shipping a cargo more valuable per unit weight than that of other firms. The gains are not, of course, retained by the railroad in the long run, but absorbed by its own land and labor factors.

Can there be price discrimination by *buyers* when the good is not resalable (and ignorance among sellers is not assumed)? No, there cannot, for the minimum reserve price imposed by, say, a laborer, is determined by the opportunity cost he has forgone elsewhere. In short, if a man earns five gold ounces a week for his labor service in firm A, he will not accept two ounces a week (although he would take two rather than earn nothing at all) since he can earn nearly five ounces somewhere else. And the meaning of price discrimination against sellers is that a buyer would be able to pay less for the same good than the seller can earn elsewhere (cost of moving, etc., omitted). Hence, there can be no price discrimination against sellers. If sellers are ignorant, then, as in the case of the ignorant consumers at a bazaar, we must infer that they prefer the lower income to the cost and trouble of learning more about the market.

7. *Patents and Copyrights*

Turning now to patents and copyrights, we ask: Which of the two, if either, is consonant with the purely free market, and which is a grant of monopoly privilege by the State? In this part, we have been analyzing the economics of the purely free market, where the individual person and property are not subject to molestation. It is therefore important to decide whether patents or copyrights will obtain in the purely free, noninvasive society, or whether they are a function of government interference.

Almost all writers have bracketed patents and copyrights together. Most have considered both as grants of exclusive monopoly privilege by the State; a few have considered both as part and parcel of property right on the free market. But almost everyone has considered patents and copyrights as equivalent: the one as conferring an exclusive property right in the field of mechanical inventions, the other as conferring an exclusive right in the field of literary creations.[93] Yet this bracketing of patents and copyrights is wholly fallacious; the two are completely different in relation to the free market.

It is true that a patent and a copyright are both exclusive property rights and it is also true that they are both property rights in *innovations*. But there is a crucial difference in their *legal enforcement*. If an author or a composer believes his copyright is being infringed, and he takes legal action, he must "prove that the defendant had 'access' to the work allegedly infringed. If the defendant produces something identical with the plaintiff's work by mere chance, there is no infringement." [94] Copyrights, in other words, have their basis in prosecution of implicit theft. The plaintiff must prove that the defendant stole the former's creation by reproducing it and selling it himself in violation of his or someone else's contract with the original seller. But if the defendant independently arrives at the same creation, the plaintiff has no copyright privilege that could prevent the defendant from using and selling his product.

Patents, on the other hand, are completely different. Thus:

> You have patented your invention and you read in the newspaper one day that John Doe, who lives in a city 2,000 miles from your town, has invented an identical or similar device, that he has licensed the EZ company to manufacture it. . . . Neither Doe nor the EZ com-

pany . . . ever heard of your invention. All believe Doe to be the inventor of a new and original device. They may all be guilty of infringing your patent . . . the fact that their infringement was in ignorance of the true facts and unintentional will not constitute a defense.[95]

Patent, then, has nothing to do with implicit theft. It confers an exclusive privilege on the first inventor, and if anyone else should, quite independently, invent the same or similar machine or product, the latter would be debarred by violence from using it in production.

We have seen in chapter 2 that the acid test by which we judge whether or not a certain practice or law is or is not consonant with the free market is this: Is the outlawed practice implicit or explicit theft? If it is, then the free market would outlaw it; if not, then its outlawry is itself government interference in the free market. Let us consider copyright. A man writes a book or composes music. When he publishes the book or sheet of music, he imprints on the first page the word "copyright." This indicates that any man who agrees to purchase this product also agrees as part of the exchange *not* to recopy or reproduce this work for sale. In other words, the author does not sell his property outright to the buyer; he sells it *on condition* that the buyer not reproduce it for sale. Since the buyer does not buy the property outright, but only on this condition, any infringement of the contract by him or a subsequent buyer is *implicit theft* and would be treated accordingly on the free market. The copyright is therefore a logical device of property right on the free market.

Part of the patent protection now obtained by an inventor could be achieved on the free market by a type of "copyright" protection. Thus, inventors must now *mark* their machines as being patented. The mark puts the buyers on notice that the invention is patented and that they cannot sell that article. But the same could be done to extend the copyright system, and without patent. In the purely free market, the inventor could mark his machine *copyright,* and then anyone who buys the machine buys it *on the condition* that he will not reproduce and sell such a machine for profit. Any violation of this contract would constitute implicit theft and be prosecuted accordingly on the free market.

The patent is incompatible with the free market *precisely to the extent that it goes beyond the copyright.* The man who has not bought a machine and who arrives at the same invention independently, will, on the free market, be perfectly able to use and sell his invention. Patents prevent a man from using his invention even though all the property is his and he has not stolen the invention, either explicitly or implicitly, from the first inventor. Patents, therefore, are grants of exclusive monopoly privilege by the State and are *invasive* of property rights on the market.

The crucial distinction between patents and copyrights, then, is not that one is mechanical and the other literary. The fact that they have been applied that way is an historical accident and does not reveal the critical difference between them.[96] The crucial difference is that copyright is a logical attribute of property right on the free market, while patent is a monopoly invasion of that right.

The application of patents to mechanical inventions and copyrights to literary works is peculiarly inappropriate. It would be more in keeping with the free market to be just the reverse. For literary creations are unique products of the individual; it is almost impossible for them to be independently duplicated by someone else. Therefore, a *patent,* instead of a copyright, for literary productions would make little difference in practice. On the other hand, mechanical inventions are discoveries of natural law rather than individual creations, and hence similar independent inventions occur all the time.[97] The simultaneity of inventions is a familiar historical fact. Hence, if it is desired to maintain a free market, it is particularly important to allow *copyrights,* but not patents, for mechanical inventions.

The common law has often been a good guide to the law consonant with the free market. Hence, it is not surprising that common-law copyright prevails for *unpublished* literary manuscripts, while there is no such thing as a common-law *patent.* At common law, the inventor also has the right to keep his invention unpublicized and safe from theft, i.e., he has the equivalent of the copyright protection for unpublicized inventions.

On the free market, there would therefore be no such thing as patents. There would, however, be copyright for any inventor or creator who made use of it, and this copyright would be *perpetual,* not limited to a certain number of years. Obviously, to be fully the property of an individual, a good has to be permanently and perpetually the property of the man and his heirs and assigns. If the State decrees that a man's property ceases at a certain date, this means that the *State* is the real owner and that it simply grants the man use of the property for a certain period of time.[98]

Some defenders of patents assert that they are not monopoly privileges, but simply property rights in inventions or even in "ideas." But, as we have seen, everyone's property right is defended in libertarian law without a patent. If someone has an idea or plan and constructs an invention, and it is stolen from his house, the stealing is an act of theft illegal under general law. On the other hand, patents actually invade the property rights of those *independent* discoverers of an idea or invention who made the discovery after the patentee. Patents, therefore, *invade* rather than defend property rights. The speciousness of this argument that patents protect property rights in ideas is demonstrated by the fact that not all, but only certain types of original ideas, certain types of innovations, are considered patentable.

Another common argument for patents is that "society" is simply making a contract with the inventor to purchase his secret, so that "society" will have use of it. In the first place, "society" could pay a straight subsidy, or price, to the inventor; it would not have to prevent all later inventors from marketing *their* inventions in this field. Secondly, there is nothing in the free economy to prevent any individual or group of individuals from purchasing secret inventions from their creators. No monopolistic patent is necessary.

The most popular argument for patents among economists is the utilitarian one that a patent for a certain number of years is necessary to encourage a sufficient amount of research expenditure for inventions and innovations in processes and products.

This is a curious argument, because the question immediately arises: By what standard do you judge that research expenditures are "too much," "too little," or just about enough? This is a problem faced by *every* governmental intervention in the market's production. Resources—the better lands, laborers, capital goods, time—in society are limited, and they may be used for countless alternative ends. By what standard does someone assert that certain uses are "excessive," that certain uses are "insufficient," etc.? Someone observes that there is little investment in Arizona, but a great deal in Pennsylvania; he indignantly asserts that Arizona deserves more investment. But what standards can he use to make this claim? The *market does* have a rational standard: the highest money incomes and highest profits, for these can be achieved only through maximum service of consumer desires. This principle of maximum service to consumers and producers alike—i.e., to everybody—governs the seemingly mysterious market allocation of resources: how much to devote to one firm or to another, to one area or another, to present or future, to one good or another, to research as compared with other forms of investment. But the observer who criticizes this allocation can have no rational standards for decision; he has only his arbitrary whim. This is especially true of criticism of *production*-relations. Someone who chides *consumers* for buying too much cosmetics may have, rightly or wrongly, some rational basis for his criticism. But someone who thinks that more or less of a certain resource should be used in a certain manner or that business firms are "too large" or "too small" or that too much or too little is spent on research or is invested in a new machine, can have no rational basis for his criticism. Businesses, in short, are producing for a market, guided by the ultimate valuations of consumers on that market. Outside observers may criticize ultimate valuations of consumers if they choose—although if they interfere with consumption based on these valuations they impose a loss of utility upon consumers—but they cannot legitimately criticize the *means:* the production relations, the allocations of factors, etc., by which these ends are served.

Capital funds are limited, and they must be allocated to various uses, one of which is research expenditures. On the market, rational decisions are made in setting research expenditures, in accordance with the best entrepreneurial expectations of an uncertain future. Coercively to encourage research expenditures would distort and hamper the satisfaction of consumers and producers on the market.

Many advocates of patents believe that the ordinary competitive conditions of the market do not sufficiently encourage the adoption of new processes and that therefore innovations must be coercively promoted by the government. But the market decides on the rate of introduction of new processes just as it decides on the rate of industrialization of a new geographic area. In fact, this argument for patents is very similar to the infant-industry argument for tariffs—that market processes are not sufficient to permit the introduction of worthwhile new processes. And the answer to both these arguments is the same: that people must balance the superior productivity of the new processes against the cost of installing them, i.e., against the advantage possessed by the old process in being already built and in existence. Coercively privileging innovation would needlessly scrap valuable plants already in existence and impose an excessive burden upon consumers. For consumers' desires would not be satisfied in the most economic manner.

It is by no means self-evident that patents encourage an increased absolute quantity of research expenditures. But certainly patents distort the *type* of research expenditure being conducted. For while it is true that the *first* discoverer benefits from the privilege, it is also true that his competitors are excluded from production in the area of the patent for many years. And since one patent can build upon a related one in the same field, competitors can often be indefinitely discouraged from *further* research expenditures in the general area covered by the patent. Moreover, the patentee is himself discouraged from engaging in further research in this field, for the privilege permits him to rest on his laurels for the entire period of the patent, with the assurance that no competitor can trespass on his domain. The competitive spur for further research is eliminated. Research expenditures are therefore *overstimulated* in the early stages before anyone has a patent, and they are *unduly restricted* in the period after the patent is received. In addition, some inventions are considered patentable, while others are not. The patent system then has the further effect of artificially stimulating research expenditures in the *patentable* areas, while artificially restricting research in the *nonpatentable* areas.

Manufacturers have by no means unanimously favored patents. R. A. Macfie, leader of England's flourishing patent-abolition movement during the nineteenth century, was president of the Liverpool Chamber of Commerce.[99] Manufacturer I. K. Brunel, before a committee of the House of Lords, deplored the effect of patents in stimulating wasteful expenditure of resources on searching for untried patentable inventions, resources that could have been better used in production. And Austin Robinson has pointed out that many industries get along without patents:

> In practice the enforcement of patent monopolies is often so difficult . . . that competing manufacturers have in some industries preferred to pool patents; and to look for sufficient reward for technical invention in the . . . advantage of priority that earlier experimentation usually gives and in the subsequent good-will that may arise from it.[100]

As Arnold Plant summed up the problem of competitive research expenditures and innovations:

> Neither can it be assumed that inventors would cease to be employed if entrepreneurs lost the monopoly over the use of their inventions. Businesses employ them today for the production of nonpatentable inventions, and they do not do so merely for the profit which priority secures. In active competition . . . no business can afford to lag behind its competitors. The reputation of a firm depends upon its ability to keep ahead, to be first in the market with new improvements in its products and new reductions in their prices.[101]

Finally, of course, the market itself provides an easy and effective course for those who feel that there are not enough expenditures being made in certain dierctions. *They can make these* *expenditures themselves.* Those who would like to see more inventions made and exploited, therefore, are at liberty to join together and subsidize such effort in any way they think best. In that way, they would, as consumers, add resources to the research and invention business. And they would not then be forcing other consumers to lose utility by conferring monopoly grants and distorting the market's allocations. Their voluntary expenditures would become *part of the market* and express ultimate consumer valuations. Furthermore, later inventors would not be restricted. The friends of invention could accomplish their aim without calling in the State and imposing losses on a large number of people.

11

Money and Its Purchasing Power

1. *Introduction*

Money has entered into almost all our discussion so far. In chapter 3 we saw how the economy evolved from barter to indirect exchange. We saw the patterns of indirect exchange and the types of allocations of income and expenditure that are made in a monetary economy. In chapter 4 we discussed money prices and their formation, analyzed the marginal utility of money, and demonstrated how monetary theory can be subsumed under utility theory by means of the money regression theorem. In chapter 6 we saw how monetary calculation in markets is essential to a complex, developed economy, and we analyzed the structure of post-income and pre-income demands for and supplies of money on the time market. And from chapter 2 on, all our discussion has dealt with a monetary-exchange economy.

The time has come to draw the threads of our analysis of the market together by completing our study of money and of the effects of changes in monetary relations on the economic system. In this chapter we shall continue to conduct the analysis within the framework of the free-market economy.

2. The Money Relation: The Demand for and the Supply of Money

Money is a commodity that serves as a general medium of exchange; its exchanges therefore permeate the economic system. Like all commodities, it has a market demand and a market supply, although its special situation lends it many unique features. We saw in chapter 4 that its "price" has no unique expression on the market. Other commodities are all expressible in terms of units of money and therefore have uniquely identifiable prices. The money commodity, however, can be expressed only by an array of all the other commodities, i.e., all the goods and services that money can buy on the market. This array has no uniquely expressible unit, and, as we shall see, changes in the array cannot be measured. Yet the concept of the "price" or the "value" of money, or the "purchasing power of the monetary unit," is no less real and important for all that. It simply must be borne in mind that, as we saw in chapter 4, there is no single "price level" or measurable unit by which the value-array of money can be expressed. This exchange-value of money also takes on peculiar importance because, unlike other commodities, the prime purpose of the money commodity is to be exchanged, now or in the future, for directly consumable or productive commodities.

The *total demand for money* on the market consists of two parts: the *exchange demand for money* (by sellers of all other goods that wish to purchase money) and the *reservation demand for money* (the demand for money to hold by those who already hold it). Because money is a commodity that permeates the market and is continually being supplied and demanded by everyone, and because the proportion which the existing stock of money bears to new production is high, it will be convenient to analyze the supply of and the demand for money in terms of the *total demand-stock* analysis set forth in chapter 2.[1]

In contrast to other commodities, everyone on the market has both an exchange demand and a reservation demand for money. The exchange demand is his *pre-income demand* (see chapter 6, above). As a seller of labor, land, capital goods, or consumers' goods, he must supply these goods and demand money in exchange to obtain a money income. Aside from speculative considerations, the seller of ready-made goods will tend, as we have seen, to have a perfectly inelastic (vertical) supply curve, since he has no reservation uses for the good. But the supply curve of a good for money is equivalent to a (partial) demand curve for money in terms of the good to be supplied. Therefore, the (exchange) demand curves for money in terms of land, capital goods, and consumers' goods will tend to be perfectly inelastic.

For labor services, the situation is more complicated. Labor, as we have seen, does have a reserved use—satisfying leisure. We have seen that the general supply curve of a labor factor can be either "forward-sloping" or "backward-sloping," depending upon the individuals' marginal utility of money and marginal disutility of leisure forgone. In determining labor's demand curve for money, however, we can be far more certain. To understand why, let us take a hypothetical example of a supply curve of a labor factor (in general use). At a wage rate of 5 gold grains an hour, 40 hours per week of labor service will be sold. Now suppose that the wage rate is raised to 8 gold grains an hour. Some people might work a greater number of hours because they have a greater monetary inducement to sacrifice leisure for labor. They might work 50 hours per week. Others may decide that the increased income permits them to sacrifice some money and take some of the increased earnings in greater leisure. They might work 30 hours. The first would represent a "forward-sloping," the latter a "backward-sloping," supply curve of labor in this price range. But both would have one thing in common. Let us multiply hours by wage rate in each case, to arrive at the total money income of the laborers in the various situations. In the original case, a laborer earned 40 times 5 or 200 gold grains per week. The man with a backward-sloping supply curve will earn 30 times 8 or 240 gold grains a week. The one with a forward-sloping supply curve will earn 50 times 8 or 400 gold grains per week. In both cases, *the man earns more money at the higher wage rate.*

This will always be true. In the first case, it is obvious, for the higher wage rate induces the man to sell more labor. But it is true in the latter case as well. For the higher money income permits a man to gratify his desires for more leisure as well, precisely *because* he is getting an *increased money income*. Therefore, a man's backward-sloping supply curve will never be "backward" enough to make him earn *less money* at higher wage rates.

Thus, a man will always earn more money at a higher wage rate, less money at a lower. But what is *earning* money but another name for *buying* money? And that is precisely what is done. People *buy* money by selling goods and services that they possess or can create. We are now attempting to arrive at the demand schedule for money in relation to various alternative purchasing powers or "exchange-values" of money. A lower exchange-value of money is equivalent to higher goods-prices in terms of money. Conversely, a higher exchange-value of money is equivalent to lower prices of goods. In the labor market, a higher exchange-value of money is translated into lower wage rates, and a lower exchange-value of money into higher wage rates.

Hence, on the labor market, our law may be translated into the following terms: *The higher the exchange-value of money, the lower the quantity of money demanded; the lower the exchange-value of money, the higher the quantity of money demanded* (i.e., the lower the wage rate, the less money earned; the higher the wage rate, the more money earned). Therefore, on the labor market, the demand-for-money schedule is *not* vertical, but falling, when the exchange-value of money increases, as in the case of any demand curve.

Adding the vertical demand curves for money in the other exchange markets to the falling demand curve in the labor market, we arrive at a falling exchange-demand curve for money.

More important, because more volatile, in the total demand for money on the market is the *reservation* demand to hold money. This is everyone's *post-income* demand. After everyone has acquired his income, he must decide, as we have seen, between the allocation of his money assets in three directions: consumption spending, investment spending, and addition to his cash balance ("net hoarding"). Furthermore, he has the additional choice of subtraction from his cash balance ("net dishoarding"). How much he decides to retain in his cash balance is uniquely determined by the marginal utility of money in his cash balance on his value scale. Until now we have discussed at length the sources of the utilities and demands for consumers' goods and for producers' goods. We have now to look at the remaining good: *money in the cash balance,* its utility and demand.

Before discussing the sources of the demand for a cash balance, however, we may determine the shape of the reservation (or "cash balance") demand curve for money. Let us suppose that a man's marginal utilities are such that he wishes to have 10 ounces of money held in his cash balance over a certain period. Suppose now that the exchange-value of money, i.e., the purchasing power of a monetary unit, increases, other things being equal. This means that his 10 gold ounces accomplish more work than they did before the change in the PPM (purchasing power of the monetary unit). As a consequence, he will tend to remove part of the 10 ounces from his cash balance and spend them on goods, the prices of which have now fallen. Therefore, *the higher the PPM* (*the exchange-value of money*), *the lower the quantity of money demanded in the cash balance.* Conversely, a lower PPM will mean that the previous cash balance is worth less in real terms than it was before, while the higher prices of goods discourage their purchase. As a result, the lower the PPM, the higher the quantity of money demanded in the cash balance.

As a result, *the reservation demand curve for money in the cash balance falls as the exchange-value of money increases.* This falling demand curve, added to the falling exchange-demand curve for money, yields the market's *total demand curve for money* —also falling in the familiar fashion for every commodity.

There is a third demand curve for the money commodity that deserves mention. This is the demand for *nonmonetary uses* of the monetary metal. This will be relatively unimportant in the advanced monetary economy, but it will exist nevertheless. In the case of gold, this will mean either uses in consumption, as for ornaments, or productive uses, as for industrial purposes. At any rate, this demand curve *also* falls as the PPM increases. As the "price" of money (PPM) increases, more goods can be obtained through expenditure of a unit of money; as a result, the opportunity-cost in using gold for nonmonetary purposes increases, and less is demanded for that purpose. Conversely, as the PPM falls, there is more incentive to use gold for its direct use. This demand curve is added to the total demand curve for money, to obtain the total demand curve for the money commodity.[2]

At any one time there is a *given total stock* of the money commodity. This stock will, at any time, be *owned by someone.* It is therefore dangerously misleading to adopt the custom of American economists since Irving Fisher's day of treating money as somehow "circulating," or worse still, as divided into "circulating money" and "idle money."[3] This concept conjures up the image of the former as moving somewhere at all times, while the latter sits idly in "hoards." This is a grave error. There is, actually, no such thing as "circulation," and there is no mysterious arena where money "moves." At any one time all the money is owned by someone, i.e., rests in someone's cash balance. Whatever the stock of money, therefore, people's actions must bring it into accord with the total demand for money to hold, i.e., the total demand for money that we have just discussed. For even pre-income money acquired in exchange must be held at least momentarily in one's cash balance before being transferred to someone else's balance. All total demand is therefore to hold, and this is in accord with our analysis of total demand in chapter 2.

Total stock must therefore be brought into agreement, on the market, with the total quantity of money demanded. The diagram of this situation is shown in Fig. 74.

On the vertical axis is the PPM, increasing upwards. On the horizontal axis is the quantity of money, increasing rightwards. D_e is the aggregate exchange-demand curve for money, falling and inelastic. D_r is the reservation or cash-balance demand for money. D_t is the total demand for money to hold (the demand for nonmonetary gold being omitted for purposes of convenience).

Somewhere intersecting the D_t curve is the *SS* vertical line—the total stock of money in the community—given at quantity *OS*.

The intersection of the latter two curves determines the equilibrium point, *A*, for the exchange-value of money in the community. The exchange-value, or PPM, will be set at *OB*.

Suppose now that the PPM is slightly higher than *OB*. The demand for money at that point will be less than the stock. People will become unwilling to hold money at that exchange-value and will be anxious to sell it for other goods. These sales will raise the prices of goods and lower the PPM, until the equilibrium point is reached. On the other hand, suppose that the PPM is lower than *OB*. In that case, more people will demand money, in exchange or in reservation, than there is money stock available. The consequent excess of demand over supply will raise the PPM again to *OB*.

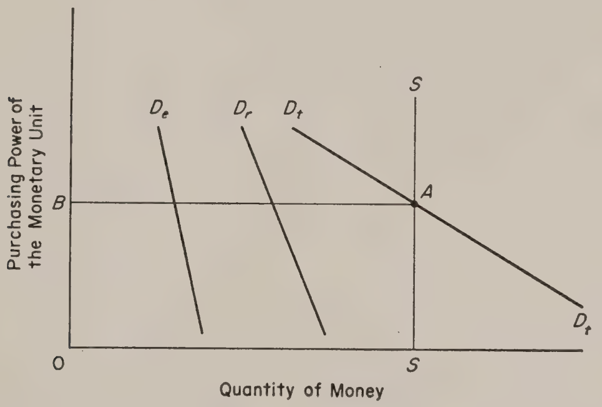


Fig. 74. Determination of the Equilibrium Point for the Exchange-Value of Money

3. *Changes in the Money Relation*

The purchasing power of money is therefore determined by two factors: *the total demand schedule for money to hold* and *the stock of money in existence.* It is easy to see on a diagram what happens when either of these determining elements changes. Thus, suppose that the schedule of total demand increases (shifts to the right). Then (see Fig. 75) the total-demand-for-money curve has shifted from D_tD_t *to* $D_t'D_t'$. At the previous equilibrium PPM point, *A*, the demand for money now exceeds the stock available by *AE*. The bids push the PPM upwards until it reaches the equilibrium point *C*. The converse will be true for a shift of the total demand curve leftward—a decline in the total demand schedule. Then, the PPM will fall accordingly.

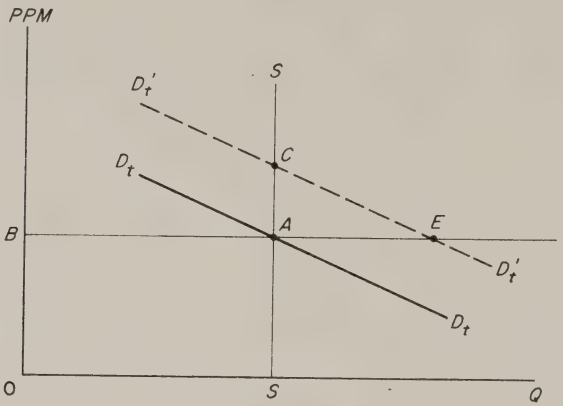


FIG. 75. EFFECT OF A CHANGE IN THE TOTAL DEMAND FOR MONEY

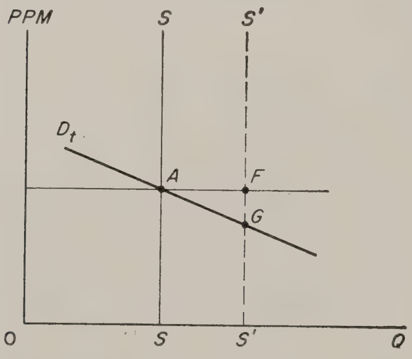


FIG. 76. EFFECT OF A CHANGE IN THE TOTAL STOCK OF MONEY

The effect of a change in the total stock, the demand curve remaining constant, is shown in Fig. 76. Total quantity of stock increases from *OS* to *OS'*. At the new stock level there is an excess of stock, *AF*, over the total demand for money. Money will be sold at a lower PPM to induce people to hold it, and the PPM will fall until it reaches a new equilibrium point *G*. Conversely, if the stock of money is decreased, there will be an excess of demand for money at the existing PPM, and the PPM will rise until the new equilibrium point is reached.

The effect of the quantity of money on its exchange-value is thus simply set forth in our analysis and diagrams.

The absurdity of classifying monetary theories into mutually exclusive divisions (such as "supply and demand theory," "quantity theory," "cash balance theory," "commodity theory," "income and expenditure theory") should now be evident.[4] For all these elements are found in this analysis. Money *is* a commodity; its supply or quantity *is* important in determining its exchange-value; demand for money for the cash balance is also important for this purpose; and the analysis can be applied to income and expenditure situations.

4. *Utility of the Stock of Money*

In the case of consumers' goods, we do not go behind their subjective utilities on people's value scales to investigate why they were preferred; economics must stop once the ranking has been made. In the case of money, however, we are confronted with a different problem. For the utility of money (setting aside the *non*monetary use of the money commodity) depends solely on its prospective use as the general medium of exchange. Hence the subjective utility of money is dependent on the objective exchange-value of money, and we must pursue our analysis of the demand for money further than would otherwise be required.[5] The diagrams above in which we connected the demand for money and its PPM are therefore particularly appropriate. For other goods, demand in the market is a means of routing commodities into the hands of their consumers. For money, on the other hand, the "price" of money is precisely the variable on which the demand schedule depends and to which almost the whole of the demand for money is keyed. To put it in another way: without a price, or an objective exchange-value, any *other* good would be snapped up as a welcome free gift; but money, without a price, would not be used at all, since its entire use consists in its command of other goods on the market. The sole use of money is to be exchanged for goods, and if it had no price and therefore no exchange-value, it could not be exchanged and would no longer be used.

We are now on the threshold of a great economic law, a truth that can hardly be overemphasized, considering the harm its neglect has caused throughout history. An increase in the supply of a producers' good increases, *ceteris paribus,* the supply of a consumers' good. An increase in the supply of a consumers' good (when there has been no decrease in the supply of another good) is demonstrably a clear *social benefit;* for someone's "real income" has increased and no one's has decreased.[6]

Money, on the contrary, is solely useful for exchange purposes. Money, *per se,* cannot be consumed and cannot be used directly as a producers' good in the productive process. Money *per se* is therefore unproductive; it is dead stock and produces nothing. Land or capital is always in the form of some specific good, some specific productive instrument. Money always remains in someone's cash balance.

Goods are useful and scarce, and any increment in goods is a social benefit. But money is useful not directly, but only in exchanges. And we have just seen that as the stock of money in society changes, the objective exchange-value of money changes inversely (though not necessarily proportionally) until the money relation is again in equilibrium. When there is less money, the exchange-value of the monetary unit rises; when there is more money, the exchange-value of the monetary unit falls. We conclude that there is no such thing as "too little" or "too much" money, *that, whatever the social money stock, the benefits of money are always utilized to the maximum extent.* An increase in the supply of money confers no social benefit whatever; it simply benefits some at the expense of others, as will be detailed further below. Similarly, a decrease in the money stock involves no social loss. For money is used only for its purchasing power in exchange, and an increase in the money stock simply dilutes the purchasing power of each monetary unit. Conversely, a fall in the money stock increases the purchasing power of each unit.

David Hume's famous example provides a highly oversimplified view of the effect of changes in the stock of money, but in the present context it is a valid illustration of the absurdity of the belief that an increased money supply can confer a social benefit or relieve any economic scarcity. Consider the magical situation where every man awakens one morning to find that his monetary assets have doubled. Has the wealth, or the real income, of society doubled? Certainly not. In fact, the real income—the actual goods and services supplied—remains unchanged. What has changed is simply the monetary unit, which has been diluted, and the purchasing power of the monetary unit will fall enough (i.e., prices of goods will rise) to bring the new money relation into equilibrium.

One of the most important economic laws, therefore, is: *Every supply of money is always utilized to its maximum extent, and hence no social utility can be conferred by increasing the supply of money.*

Some writers have inferred from this law that any factors devoted to gold mining are being used unproductively, because an increased supply of money does not confer a social benefit. They deduce from this that the government should restrict the amount of gold mining. These critics fail to realize, however, that gold, the money-*commodity,* is used not only as money but also for nonmonetary purposes, either in consumption or in production. Hence, an increase in the supply of gold, although conferring no *monetary* benefit, does confer a social benefit by increasing the supply of gold for direct use.

5. *The Demand for Money*

A. MONEY IN THE ERE AND IN THE MARKET

It is true, as we have said, that the only use for money is in exchange. From this, however, it must not be inferred, as some writers have done, that this exchange must be *immediate.* Indeed, the reason that a reservation demand for money exists and cash balances are kept is that the individual is keeping his money in reserve for *future* exchanges. That is the function of a cash balance—to wait for a propitious time to make an exchange.

Suppose the ERE has been established. In such a world of certainty, there would be no risk of loss in investment and no need to keep cash balances on hand in case an emergency for consumer spending should arise. Everyone would therefore allocate his money stock fully, to the purchase of either present goods or future goods, in accordance with his time preferences. No one would keep his money idle in a cash balance. Knowing that he will want to spend a certain amount of money on consumption in six months' time, a man will lend his money out for that period to be returned at precisely the time it is to be spent. But if no one is willing to keep a cash balance longer than instantaneously, there will be no money held and no use for a money stock. Money, in short, would either be useless or very nearly so in the world of certainty.

In the real world of uncertainty, as contrasted to the ERE, even "idle" money kept in a cash balance performs a use for its owner. Indeed, if it did not perform such a use, it would not be kept in his cash balance. Its uses are based precisely on the fact that the individual is not certain on what he will spend his money or of the precise time that he will spend it in the future.

Economists have attempted mechanically to reduce the demand for money to various sources.[7] There is no such mechanical determination, however. Each individual decides for himself by his own standards his whole demand for cash balances, and we can only trace various influences which different catallactic events may have had on demand.

B. SPECULATIVE DEMAND

One of the most obvious influences on the demand for money is *expectation of future changes in the exchange-value of money.* Thus, suppose that, at a certain point in the future, the PPM of money is expected to drop rapidly. How the demand-for-money schedule now reacts depends on the number of people who hold this expectation and the strength with which they hold it. It also depends on the distance in the future at which the change is expected to take place. The further away in time any economic event, the more its impact will be discounted in the present by the interest rate. Whatever the degree of impact, however, *an expected future fall in the PPM will tend to lower the PPM now.* For an expected fall in the PPM means that present units of money are worth more than they will be in the future, in which case there will be a fall in the demand-for-money schedule as people tend to spend more money now than at the future date. A general expectation of an imminent fall in the PPM will lower the demand schedule for money now and thus tend to bring about the fall at the present moment.

Conversely, an expectation of a rise in the PPM in the near future will tend to raise the demand-for-money schedule as people decide to "hoard" (add money to their cash balance) in expectation of a future rise in the exchange value of a unit of their money. The result will be a *present* rise in the PPM.

An expected fall in the PPM in the future will therefore lower the PPM now, and an expected rise will lead to a rise now. The speculative demand for money functions in the same manner as the speculative demand for any good. An anticipation of a future point speeds the adjustment of the economy toward that future point. Just as the speculative demand for a good speeded adjustment to an equilibrium position, so the anticipation of a change in the PPM speeds the market adjustment toward that position. Just as in the case of any good, furthermore, errors in this speculative anticipation are "self-correcting." Many writers believe that in the case of *money* there is no such self-correction. They assert that while there may be a "real" or underlying demand for goods, money is not consumed and therefore has no such underlying demand. The PPM and the demand for money, they declare, can be explained only as a perpetual and rather meaningless cat-and-mouse race in which everyone is simply trying to anticipate everyone else's anticipations.

There *is,* however, a "real" or underlying demand for money. Money may not be physically consumed, but it is used, and therefore it has utility in a cash balance. Such utility amounts to more than speculation on a rise in the PPM. This is demonstrated by the fact that people *do* hold cash even when they anticipate a fall in the PPM. Such holdings may be reduced, but they still exist, and as we have seen, this must be so in an uncertain world. In fact, without willingness to hold cash, there could be no monetary-exchange economy whatever.

The speculative demand therefore anticipates the underlying nonspeculative demands, whatever their source or inspiration.

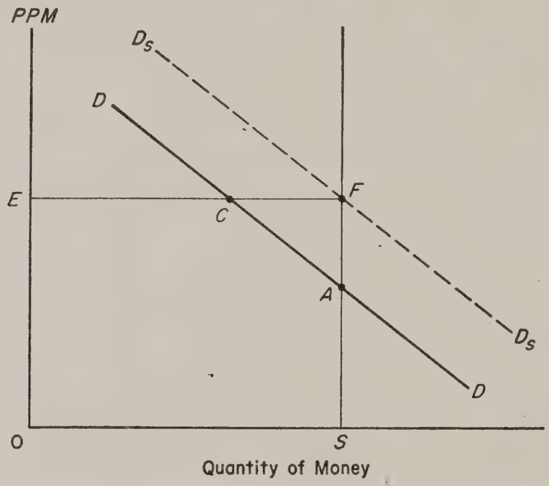


Fig. 77. Self-Correction of Speculative Anticipations of the Demand for Money

Suppose, then, that there is a general anticipation of a rise in the PPM (a fall in prices) not reflected in underlying supply and demand. It is true that, at first, this general anticipation raises, *ceteris paribus,* the demand for money and the PPM. But this situation does not last. For now that a pseudo "equilibrium" has been reached, the speculative anticipators, who did not "really" have an increased demand for money, sell their money (buy goods) to reap their gains. But this means that the underlying demand comes to the fore, and this is less than the money stock at that PPM. The pressure of spending then lowers the PPM again to the true equilibrium point. This may be diagramed as in Fig. 77.

Money stock is *OS*; the true or underlying money demand is *DD,* with true equilibrium point at *A*. Now suppose that the people on the market erroneously anticipate that true demand will be such in the near future that the PPM will be raised to OE. The total demand curve for money then shifts to D_sD_s, the new total demand curve including the speculative demand. The PPM does shift to OE as predicted. But now the speculators move to cash in their gain, since their true demand for money really reflects DD rather than D_sD_s. At the new price OE, there is in fact an excess of money stock over quantity demanded, amounting to CF. Sellers rush to sell their stock of money and buy goods, and the PPM falls again to equilibrium. Hence, in the field of money as well as in that of specific goods, speculative anticipations are self-correcting, not "self-fulfilling." They speed the market process of adjustment.

C. SECULAR INFLUENCES ON THE DEMAND FOR MONEY

Long-run influences on the demand for money in a progressing economy will tend to be manifold, and in both directions. On the one hand, an advancing economy provides ever more occasions for new exchanges as more and more commodities are offered on the market and as the number of stages of production increases. These greater opportunities tend greatly to increase the demand-for-money schedule. If an economy deteriorates, fewer opportunities for exchange exist, and the demand for money from this source will fall.

The major long-run factor counteracting this tendency and tending toward a *fall* in the demand for money is the growth of the *clearing system*.[8] Clearing is a device by which money is economized and performs the function of a medium of exchange *without being physically present* in the exchange.

A simplified form of clearing may occur between two people. For example, A may buy a watch from B for three gold ounces; at the same time, B buys a pair of shoes from A for one gold ounce. Instead of two transfers of money being made, and a total of four gold ounces changing hands, they decide to perform a clearing operation. A pays B two ounces of money, and they exchange the watch and the shoes. Thus, when a clearing is made, and only the *net* amount of money is actually transferred, all parties can engage in the same transactions at the same prices, but using far less cash. Their demand for cash tends to fall.

There is obviously little scope for clearing, however, as long as all transactions are *cash* transactions. For then people have to exchange one another's goods *at the same time*. But the scope for clearing is vastly increased when *credit* transactions come into play. These credits may be quite short-term. Thus, suppose that A and B deal with each other quite frequently during a year or a month. Suppose they agree not to pay each other immediately in cash, but to give each other credit until the end of each month. Then B may buy shoes from A on one day, and A may buy a watch from B on another. At the end of the period, the debts are canceled and cleared, and the net debtor pays one lump sum to the net creditor.

Once credit enters the picture, the clearing system can be extended to as many individuals as find it convenient. The more people engage in clearing operations (often in places called "clearinghouses") the more cancellations there will be, and the more money will be economized. At the end of the week, for example, there may be five people engaged in clearing, and A may owe B 10 ounces, B owe C 10 ounces, C owe D, etc., and finally E may owe A 10 ounces. In such a case, 50 ounces' worth of debt transactions and potential cash transactions are settled without a single ounce of cash being used.

Clearing, then, is a process of reciprocal cancellations of money debts. It permits a huge quantity of monetary exchanges without actual possession and transfer of money, thereby greatly reducing the demand for money. Clearing, however, cannot be all-encompassing, for there must be some physical money which *could* be used to settle the transaction, and there must be physical money to settle when there is no 100% cancellation (which rarely occurs).

D. DEMAND FOR MONEY UNLIMITED?

A popular fallacy rejects the concept of "demand for money" because it is allegedly always unlimited. This idea misconceives the very nature of demand and confuses money with wealth or income. It is based on the notion that "people want as much money as they can get." In the first place, this is true for *all* goods.

People would like to have far more goods than they can procure now. But *demand* on the market does not refer to all possible entries on people's value scales; it refers to *effective* demand, to desires made effective by being "demanded," i.e., by the fact that something else is "supplied" for it. Or else it is reservation demand, which takes the form of holding back the good from being sold. Clearly, effective demand for money is not and cannot be unlimited; it is limited by the appraised value of the goods a person can sell in exchange and by the amount of that money which the individual wants to spend on goods rather than keep in his cash balance.

Furthermore, it is, of course, not "money" *per se* that he wants and demands, but money for its purchasing power, or "real" money, money in some way expressed in terms of what it will purchase. (This purchasing power of money, as we shall see below, cannot be *measured*.) More money does him no good if its purchasing power for goods is correspondingly diluted.

E. THE PPM AND THE RATE OF INTEREST

We have been discussing money, and shall continue to do so in the current section, by comparing equilibrium positions, and not yet by tracing step by step how the change from one position to another comes about. We shall soon see that in the case of the price of money, as contrasted with all other prices, the very path toward equilibrium necessarily introduces changes that will change the equilibrium point. This will have important theoretical consequences. We may still talk, however, as if money is "neutral," i.e., does not lead to such changes, because this assumption is perfectly competent to deal with the problems analyzed so far. This is true, in essence, because we are able to use a general concept of the "purchasing power of money" without trying to define it concretely in terms of specific arrays of goods. Since the concept of the PPM is relevant and important even though its specific content changes and cannot be measured, we are justified in assuming that money is neutral as long as we do not need a more precise concept of the PPM.

We have seen how changes in the money relation change the PPM. In the determination of the interest rate, we must now modify our earlier discussion in chapter 6 to take account of allocating one's money stock by adding to or subtracting from one's cash balance. A man may allocate his money to consumption, investment, or addition to his cash balance. His time preferences govern the *proportion* which an individual devotes to present and to future goods, i.e., to *consumption* and to *investment.* Now suppose a man's demand-for-money schedule increases, and he therefore decides to allocate a proportion of his money income to increasing his cash balance. *There is no reason to suppose that this increase affects the consumption/investment proportion at all.* It could, but if so, it would mean a change in his *time preference* schedule as well as in his demand for money.

If the demand for money increases, *there is no reason why a change in the demand for money should affect the interest rate one iota.* There is no necessity at all for an increase in the demand for money to raise the interest rate, or a decline to lower it—no more than the opposite. In fact, there is no causal connection between the two; one is determined by the valuations for money, and the other by valuations for time preference.

Let us return to the section in chapter 6 on Time Preference and the Individual's Money Stock. Did we not see there that an increase in an individual's money stock *lowers* the effective time-preference rate along the time-preference schedule, and conversely that a decrease raises the time-preference rate? Why does this not apply here? Simply because we were dealing with each individual's money stock and assuming that the "real" exchange-value of each unit of money remained the same. His time-preference schedule relates to "real" monetary units, not simply to money itself. If the social stock of money changes or if the demand for money changes, the objective exchange-value of a monetary unit (the PPM) will change also. If the PPM falls, then *more* money in the hands of an individual may not necessarily lower the time-preference rate on his schedule, for the more money may only just compensate him for the fall in the PPM, and his "real money stock" may therefore be the same as before. This again demonstrates that the money relation is *neutral* to time preference and the pure rate of interest.

An increased demand for money, then, tends to lower prices all around without changing time preference or the pure rate of interest. Thus, suppose total social income is 100, with 70 allocated to investment and 30 to consumption. The demand for money increases, so that people decide to hoard a total of 20. Expenditure will now be 80 instead of 100, 20 being added to cash balances. Income in the next period will be only 80, since expenditures in one period result in the identical income to be allocated to the next period.[9] If time preferences remain the same, then the proportion of investment to consumption in the society will remain roughly the same, i.e., 56 invested and 24 consumed. Prices and nominal money values and incomes fall all along the line, and we are left with the same capital structure, the same *real* income, the same interest rate, etc. The only things that have changed are nominal prices, which have fallen, and the proportion of total cash balances to money income, which has increased.

A decreased demand for money will have the reverse effect. Dishoarding will raise expenditure, raise prices, and, *ceteris paribus,* maintain the real income and capital structure intact. The only other change is a *lower* proportion of cash balances to money income.

The only necessary result, then, of a change in the demand-for-money schedule is precisely a change in the same direction of the proportion of total cash balances to total money income and in the real value of cash balances. Given the stock of money, an increased scramble for cash will simply lower money incomes until the desired increase in real cash balances has been attained.

If the demand for money falls, the reverse movement occurs. The desire to reduce cash balances causes an increase in money income. Total cash remains the same, but its proportion to incomes, as well as its real value, declines.[10]

F. HOARDING AND THE KEYNESIAN SYSTEM

1) *Social Income, Expenditures, and Unemployment*

To the great bulk of writers "hoarding"—an increase in the demand for money—has appeared an unmitigated catastrophe.

The very word "hoarding" is a most inappropriate one to use in economics, since it is laden with connotations of vicious antisocial action. But there is nothing at all antisocial about either "hoarding" or "dishoarding." "Hoarding" is simply an increase in the demand for money, and the result of this change in valuations is that people get what they desire, i.e., an increase in the real value of their cash balances and of the monetary unit.[11] Conversely, if the people desire a *lowering* of their real cash balances or in the value of the monetary unit, they may accomplish this through "dishoarding." No other significant economic relation—real income, capital structure, etc.—need be changed at all. The process of hoarding and dishoarding, then, simply means that people want something, either an increase or a decrease in their real cash balances or in the real value of the monetary unit, and that they are able to obtain this result. What is wrong with that? We see here simply another manifestation of consumers' or individuals' "sovereignty" on the free market.

Furthermore, there is no theoretical way of defining "hoarding" beyond a simple addition to one's cash balance in a certain period of time. Yet most writers use the term in a normative fashion, implying that there is some vague standard below which a cash balance is legitimate and above which it is antisocial and vicious. But any quantitative limit set on the demand-for-money schedule would be completely arbitrary and unwarranted.

One of the two major pillars of the Keynesian system (now happily beginning to wane after sweeping the economic world in the 1930's and 1940's) is the proclamation that savings become equal to investment only through the terrible route of a decline in social income. The (implicit) foundation of Keynesianism is the assertion that at a certain level of total social income, total social expenditures out of this income will be lower than income, the remainder going into hoards. This will lower total social income in the next period of time, since, as we have seen, total income in one "day" equals, and is determined by, total expenditures in the previous "day."

The Keynesian "consumption function" plays its part in establishing an alleged law that there exists a certain level of total income, say *A, above which* expenditures will be less than income (net hoarding), and *below which* expenditures will be greater than income (net dishoarding). But the basic Keynesian worry is hoarding, when total income must decline. This situation may be diagramed as in Fig. 78.

In this graph, money income is plotted on both the horizontal and the vertical axes. Hence, a 45° straight line between the axes is equal to social income.[12] To illustrate: A social income of 100 on the horizontal axis will correspond to, and equal, a social income of 100 on the vertical axis. The co-ordinates of these figures will meet at a point equidistant between the two axes. The Keynesian law asserts social expenditures to be lower than social income above point *A*, and higher than social income below point *A*, so that *A* will be the equilibrium point for social income to equal expenditure. For if social income is higher than *A*, social expenditures will be lower than income, and income will therefore tend to decline from one day to the next until the equilibrium point *A* is reached. If social income is lower than *A*, dishoarding will occur, expenditures will be higher than income, until finally *A* is reached again.

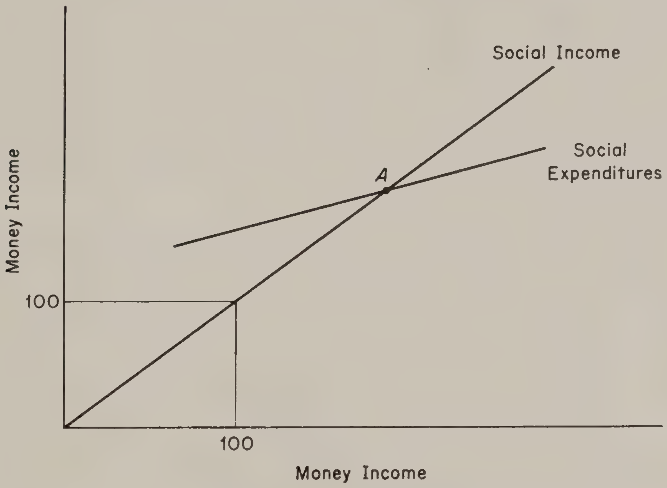


FIG. 78. RELATION BETWEEN SOCIAL INCOME AND SOCIAL EXPENDITURE ACCORDING TO KEYNES

Below, we shall investigate the validity of this alleged law and the "consumption function" on which it rests. But suppose that we now grant the validity of such a law; the only comment can be an impertinent: So what? What if there is a fall in the national income? Since the fall need only be in *money* terms, and real income, real capital, etc., may remain the same, why any alarm? The only change is that the hoarders have accomplished their objective of increasing their real cash balances and increasing the real value of the monetary unit. It is true that the picture is rather more complex for the transition process until equilibrium is reached, and this will be treated further below (although our final conclusion will be the same). But the Keynesian system attempts to establish the perniciousness of the equilibrium position, and this it cannot do.

Therefore, the elaborate attempts of the Keynesians to demonstrate that free market expenditures will be limited—that consumption is limited by the "function," and investment by stagnation of opportunities and "liquidity preference"—are futile. For even if they were correct (which they are not), the result would be pointless. There is nothing wrong with hoarding or dishoarding, or with "low" or "high" levels (whatever that may mean) of social money income.

The Keynesian attempt to salvage meaning for their doctrine rests on one point and one point alone—the second major pillar of their system. This is the thesis that *money social income and level of employment are correlated,* and that *the latter is a function of the former.* This assumes that a certain "full employment" level of social income exists below which there is correspondingly greater unemployment. This can be diagramed as in Fig. 79.

On the previous diagram is superimposed a vertical *FF* line, which represents the point of alleged "full-employment" social income. If the intersection *A* is below (to the left of) the *FF* line, then there is permanent unemployment corresponding to the distance by which *A* falls short of that line.

Keynesians have also attempted, with little success, to give meaning to an equilibrium position where *A* falls to the right of the *FF* line, identifying this with inflation. Inflation, as we shall see below, is a dynamic process, the essence of which is change. The Keynesian system centers around the equilibrium position and therefore is hardly well equipped to analyze an inflationary situation.

The nub of the Keynesian critique of the free market economy, then, rests on the involuntary unemployment allegedly caused by too low a level of social expenditures and income. But how can this be, since we have previously explained that there can be no involuntary unemployment in a free market? The answer has become evident (and is admitted in the most intelligent of the Keynesian writings): The Keynesian "underemployment equilibrium" occurs only *if money wage rates are rigid downward,* i.e., if the supply curve of labor below "full employment" is infinitely elastic.[13] Thus, suppose there is a "hoarding" (an increased demand for money), and social income falls. The result is a fall in the monetary demand curves for labor factors, as well as in all other monetary demand curves. We would expect the general supply curve of labor factors to be vertical. Since only *money* wage rates are being changed while *real*

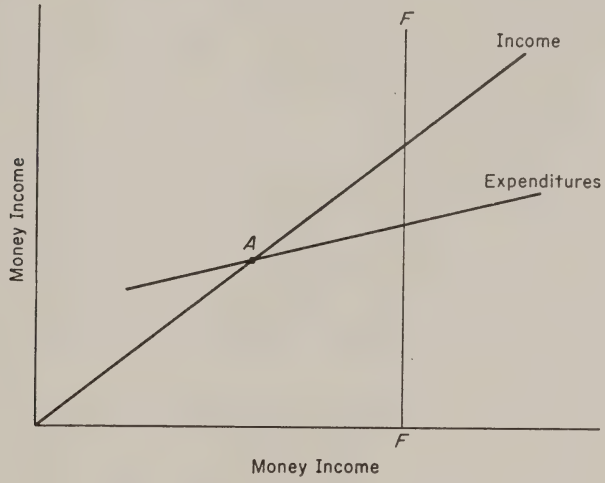


FIG. 79. RELATION BETWEEN FULL EMPLOYMENT AND SOCIAL INCOME AND EXPENDITURES ACCORDING TO KEYNES

wage rates (in terms of purchasing power) remain the same, there will be no shift in labor/leisure preferences, and the total stock of labor offered on the market will remain constant. At any rate, certainly no involuntary unemployment will arise.

How then can the Keynesian case arise? How can the supply of labor remain horizontal at the old money wage rate? In only two ways: (1) if people voluntarily agree with the unions, which insist that no one be employed at lower than the old money wage rate. Since selling prices are falling, maintaining the old money wage rate is equivalent to demanding a higher real wage rate. We have seen above that the unions' raising of real wage rates causes unemployment. But this unemployment is *voluntary,* since the workers acquiesce in the imposition of a higher minimum real wage rate, below which they will not undercut the union and accept employment. Or (2) unions or government coercively impose the minimum wage rate. But this is an example of a *hampered* market, not the free market to which we are confining our analysis here.

Situation (1) or (2) may be diagramed as in Fig. 80.

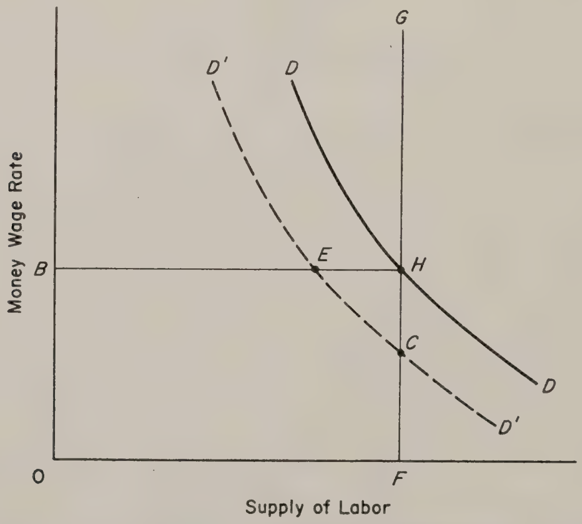


FIG. 80. UNEMPLOYMENT RESULTING FROM FIXING MONEY WAGES AT HIGHER THAN FREE-MARKET RATES

The original demand curve for labor is *DD* (for simplicity of exposition we assume as meaningful the concept of "demand for labor" in general). Total stock of labor in the society is *OF,* or at least that is the stock put forward upon the market. Now an increase in the demand for money shifts all demand curves downwards as all money prices fall. If wage rates are free to fall, the intersection point will move from *H* to *C* and nominal wage rates reduced accordingly, from *FH* to *FC*. There is still "full employment" at level *OF*. Now suppose however, that a union sets a minimum money wage rate of *OB* (or *FH*). Then the supply-of-labor curve becomes *BHG;* horizontal up to *FG* and vertical from there on. The new demand curve *D'D'* will now intersect the supply of labor at point *E* instead of point *C*. Total amount of labor now employed is reduced to *BE,* and *EH* are now unemployed as a result of the union action.

Keynes' own exposition tended to run in terms of real rather than money magnitudes—real social income, real expenditures, etc.[14] Such an analysis obscures dynamic considerations, since transactions take place at least superficially in monetary terms on the market. However, the essential conclusion of our analysis remains unchanged if we pursue it directly in real terms. Instead of falling, demand curves in *real* terms will now remain the same. This is true for the labor market as well. Instead of being depicted on a diagram as a horizontal line at existing wage rates, the effect of union action would have to be shown as a horizontally imposed *increase* in real wage rates (the result of keeping money wage rates constant while selling prices fall). The relevant diagram is shown in Fig. 81. The facts depicted in this diagram are the same as in the previous diagram: unions causing unemployment (*EH*) by insisting on an excessively high money (and therefore real) wage (*OB*).

The sum and substance of the "Keynesian Revolution" was the thesis that there *can* be an unemployment equilibrium on the free market. As we have seen, the only sense in which this is true was known years before Keynes: that widespread union maintenance of excessively high wage rates will cause unemployment.

Keynes believed that while other elements of the economic system, including prices, were set basically in real terms, workers bargained even ultimately only in terms of *money* wages—that unions insisted on minimum money wage rates downward, but would passively accept falling real wages in the form of rising prices, money wage rates remaining the same. The Keynesian prescription for eliminating unemployment therefore rests specifically on the "money illusion"—that unions will impose minimum *money* wage rates, but are too stupid to impose minimum real wage rates *per se.* Unions, however, have learned about purchasing-power problems and the distinction between money and real rates; indeed, it hardly requires much reasoning ability to grasp this distinction.[15] Ironically, Keynes' advocacy of inflation based on the "money illusion" rested on the historical experience (which we shall treat more fully below) that, during an inflation, selling prices rise faster than wage rates. Yet an economy in which unions impose minimum wage rates is precisely an economy in which unions will be alive to any losses in their real, as well as their money, wages. Inflation, therefore, cannot be used as a means of duping unions into relieving unemployment.[16] Keynesianism has been touted as at least a "practical" system. What-

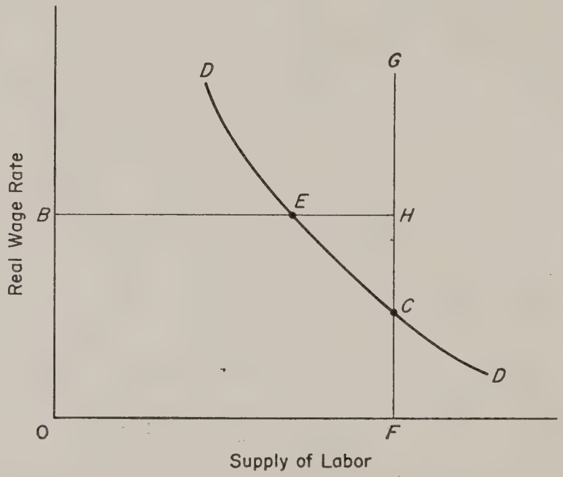


FIG. 81. UNEMPLOYMENT RESULTING FROM FIXING REAL WAGES AT HIGHER THAN FREE-MARKET RATES

ever its theoretical defects, it is alleged to be fit for the modern world of unionism. Yet it is precisely in the modern world that Keynes' doctrine is least appropriate or practical.[17]

The Keynesians object that to allow rigid money wage rates to become flexible downward would further lower monetary demand for goods, and therefore monetary income. But this completely confuses *wage rates* with *aggregate payroll,* or total income going to wages.[18] That the former falls does not mean that the latter falls. On the contrary, total income is, as we have seen, determined by total expenditures in the previous period of time. Lower wage rates will cause the hiring of those made unemployed by the old excessively high wage rates. The fact that labor is now cheaper relatively to land factors will cause investors to expend a greater proportion on labor vis à vis land than before. And the employment of unemployed labor increases production and therefore aggregate real income. Furthermore, even if payrolls also decline, prices and wage rates can adjust—but this will be taken up in the next section on liquidity preference.

2) *"Liquidity Preference"*

Those Keynesians who recognize the grave difficulties of their system fall back on one last string in their bow—"liquidity preference." Intelligent Keynesians will concede that involuntary unemployment is a "special" or rare case, and Lindahl goes even further to say that it could be only a *short*-run and not a long-run equilibrium phenomenon.[19] Neither Modigliani nor Lindahl, however, is thoroughgoing enough in his critique of the Keynesian system, particularly of the "liquidity preference" doctrine.

The Keynesian system, as is quite clear from the mathematical portrayals of it given by its followers, suffers grievously from the mathematical-economic sin of "mutual determination." The use of mathematical functions, which are reversible at will, is appropriate in physics, where we do not know the causes of the observed movements. Since we do not know the causes, any mathematical law explaining or describing movements will be reversible, and, as far as we are concerned, any of the variables in the function is just as much "cause" as another. In praxeology, the science of human action, however, we *know* the original cause—motivated action by individuals. This knowledge provides us with true axioms. From these axioms, true laws are deduced. They are deduced step by step in a logical, cause-and-effect relationship. Since first causes are known, their consequent effects are also known. Economics therefore traces unilinear cause-and-effect relations, not vague "mutually determining" relations.

This methodological reminder is singularly applicable to the Keynesian theory of interest. For the Keynesians consider the rate of interest (*a*) as *determining* investment and (*b*) as being determined by the demand for money to hold "for speculative purposes" (liquidity preference). In practice, however, they treat the latter *not* as determining the rate of interest, but as *being determined* by it. The methodology of "mutual determination" has completely obscured this sleight of hand. Keynesians might object that all demand and supply curves are "mutually determining" in their relation to price. But this facile assertion is not correct. Demand curves are determined by utility scales, and supply curves by speculation and the stock produced by given labor and land factors, which is ultimately governed by time preferences.

The Keynesians therefore treat the rate of interest, *not* as they believe they do—as determined by liquidity preference—but rather as some sort of mysterious and unexplained force imposing itself on the other elements of the economic system. Thus, Keynesian discussion of liquidity preference centers around "inducement to hold cash" as the rate of interest rises or falls. According to the theory of liquidity preference, a fall in the rate of interest increases the quantity of cash demanded for "speculative purposes" (liquidity preferences), and a rise in the rate of interest lowers liquidity preference.

The first error in this concept is the arbitrary separation of the demand for money into two separate parts: a "transactions demand," supposedly determined by the size of social income, and a "speculative demand," determined by the rate of interest. We have seen that all sorts of influences impinge themselves on the demand for money. But they are only influences working *through* the value scales of individuals. And there is only *one* final demand for money, because each individual has only one value scale. There is no way by which we can split the demand up into two parts and speak of them as independent entities. Furthermore, there are far more than two influences on demand. In the final analysis, the demand for money, like all utilities, cannot be reduced to simple determinants; it is the outcome of free, independent decisions on individual value scales. There is, therefore, no "transaction demand" uniquely determined by the size of income.

The "speculative demand" is mysterious indeed. Modigliani explains this "liquidity preference" as follows: ". . . we should expect that any fall in the rate of interest . . . would induce a growing number of potential investors to keep their assets in the form of money, rather than securities; that is to say, we should expect a fall in the rate of interest to increase the demand for money as an asset." [20] This is subject to the criticism, as we have seen, that the rate of interest is here *determining,* and is not *itself* explained by any cause. Furthermore, what does this statement mean? A fall in the rate of interest, according to the Keynesians, means that less interest is being earned from bonds, and therefore there is a greater inducement to hold cash. This is correct (as long as we allow ourselves to think in terms of the interest rate as *determining* instead of *being determined*), but highly inadequate. For if a lower interest rate "induces" greater cash holdings, it also induces greater *consumption,* since consumption also becomes more attractive. In fact, one of the grave defects of the liquidity-preference approach is that the Keynesians never think in terms of *three* "margins" being decided at once. They think only in terms of two at a time. Hence, Modigliani: "Having made his consumption-saving plan, the individual has to make decisions concerning the assets he owns"; i.e., he then allocates them between money and securities.[21] In other words, people first decide between consumption and saving (in the sense of not consuming); and *then* they decide between investing and hoarding these savings. But this is an absurdly artificial construction. People decide on all three of their alternatives, weighing one against each of the others. To say that people first decide between consuming and not consuming and *then* choose between hoarding and investing is just as misleading as to say that people first choose how much to hoard and then decide between consumption and investment.[22]

People, therefore, allocate their money among consumption, investment, and hoarding. *The proportion between consumption and investment reflects individual time preferences.* Consumption reflects desires for present goods, and investment reflects desires for future goods. An increase in the demand-for-money schedule does *not* affect the rate of interest if the proportion between consumption and investment (i.e., time preference) remains the same.

The rate of interest, we must reiterate, is *determined by* time preferences, which also determine the proportions of consumption and investment. To think of the rate of interest as "inducing" more or less saving or hoarding is to misunderstand the problem completely.[23]

Admitting, then, that time preference determines the proportions of consumption and investment and that the demand for money determines the proportion of income hoarded, does the demand for money play a role in determining the interest rate? The Keynesians assert that there is a relation between the rate of interest and a "speculative" demand for cash. Should the schedule of the latter rise, the former rises also. But this is not necessarily true. A greater proportion of funds hoarded can be drawn from three alternative sources: (*a*) from funds that formerly went into consumption, (*b*) from funds that went into investment, and (*c*) from a mixture of both that leaves the old consumption-investment proportion unchanged. Condition (*a*) will bring about a *fall* in the rate of interest; condition (*b*) a *rise* in the rate of interest, and condition (*c*) will leave the rate of interest unchanged. Thus hoarding may reflect either a rise, a fall, or no change in the rate of interest, depending on whether *time preferences* have concomitantly risen, fallen, or remained the same.

The Keynesians contend that the speculative demand for cash depends upon and determines the rate of interest in this way: if people expect that the rate of interest will rise in the near future, then their liquidity preference increases to await this rise. This, however, can hardly be a part of a long-run *equilibrium* theory, such as Keynes is trying to establish. Speculation, by its very nature, disappears in the ERE, and hence no fundamental causal theory can be based upon it. Furthermore, what *is* an interest rate? One grave and fundamental Keynesian error is to persist in regarding the interest rate as a contract rate on loans, instead of the price spreads between stages of production. The former, as we have seen, is only the reflection of the latter. A strong expectation of a rapid rise in interest rate means a strong expectation of an increase in the price spreads, or rate of net return. A fall in prices means that entrepreneurs generally expect that factor prices will fall *further* in the near future than their selling prices. But it requires no Keynesian labyrinth to explain this phenomenon; all we are confronted with is a situation in which entrepreneurs, expecting that factor prices will soon fall, cease investing and wait for this happy event so that their return will be greater. This is *not* "liquidity preference," but *speculation on price changes.* It involves a modification of our previous discussion of the relation between prices and the demand for money, caused by a fact that we shall explore soon in detail, namely, that prices do not change equally and proportionately.

The expectation of falling factor prices speeds up the movement toward equilibrium and hence toward the pure interest relation as determined by time preference.[24]

If, for example, unions keep wage rates artificially high, "hoarding" will increase as unions keep wage rates ever higher than the equilibrium rate at which "full employment" can be maintained. This induced hoarding lowers the money demand for factors and increases unemployment still further, but only because of wage-rate rigidity.[25]

The final Keynesian bogey is that people may acquire an unlimited demand for money, so that hoards will indefinitely increase. This is termed an "infinite" liquidity preference. And this is the only case in which neo-Keynesians such as Modigliani believe that involuntary unemployment can be compatible with price and wage freedom. The Keynesian worry is that people will hoard instead of buying bonds for fear of a fall in the price of securities. Translating this into more important "natural" terms, this would mean, as we have stated, not investing because of expectation of imminent increases in the natural interest rate. Rather than act as a blockade, however, this expectation *speeds* the ensuing adjustment. Furthermore, the demand for money could not be infinite since people must always continue consuming, whatever their expectations. Of necessity, therefore, the demand for money could never be infinite. The existing level of consumption, in turn, will require a certain level of investment. As long as productive activities are continuing, there is no need or possibility of lasting unemployment, regardless of the degree of hoarding.[26]

A demand for money to hold stems from the general uncertainty of the market. Keynesians, however, attribute liquidity preference, not to *general* uncertainty, but to the specific uncertainty of future bond prices. Surely this is a highly superficial and limiting view.

In the first place, this cause of liquidity preference could occur only on a highly imperfect securities market. As Lachmann pointed out years ago in a neglected article, Keynes' causal pattern—"bearishness" causing "liquidity preference" (demand for cash) and high interest rates—could take place only in the absence of an organized forward or *futures* market for securities. If such a market existed, both bears and bulls on the bond market "could express their expectations by forward transactions which do not require any cash. Where the market for securities is fully organized over time, the owner of 4% bonds who fears a rise in the rate of interest has no incentive to exchange them for cash, for he can always 'hedge' by selling them forward." [27] Bearishness would cause a fall in forward bond prices, followed immediately by a fall in spot prices. Thus, speculative bearishness would, of course, cause at least a temporary rise in the rate of interest, but accompanied by *no* increase in the demand for cash. Hence, any attempted connection between liquidity preference, or demand for cash, and the rate of interest, falls to the ground.

The fact that such a securities market has not been organized indicates that traders are not nearly as worried about rising interest rates as Keynes believes. If they were and this fear loomed as an important phenomenon, then surely a futures market would have developed in securities.

Furthermore, as we have seen, interest rates on loans are merely a reflection of price spreads, so that a prediction of higher interest rates really means the expectation of lower *prices* and, especially, lower costs, resulting in a greater demand for money. And all speculation, on the free market, is self-correcting and speeds adjustment, rather than a cause of economic trouble.

G. THE PURCHASING-POWER AND TERMS-OF-TRADE COMPONENTS IN THE RATE OF INTEREST

Many economists, beginning with Irving Fisher, have asserted that the market rate of interest, in addition to containing specific entrepreneurial components superimposed on the pure rate of interest, also contains a "price" or a "purchasing-power component." When the purchasing power of money is generally expected to rise, the theory asserts that the market rate of interest falls correspondingly; when the PPM is expected to fall, the theory declares that the market rate of interest rises correspondingly.

These economists erred by concentrating on the *loan rate* rather than on the natural rate (the rate of return). The reasoning behind this theory was as follows: If the purchasing power of money is expected to change, then the pure rate of interest (determined by time preference) will no longer be the same in "real terms." Suppose that 100 gold ounces exchange for 105 gold ounces a year from now—i.e., that the rate of interest is 5%. Now, suddenly, let there be a general expectation that the purchasing power of money will increase. In that case, a *lower* amount to be returned, say 102 ounces, may yield 5% real interest in terms of purchasing power. A general expectation of a rise in purchasing power, therefore, will lower the market rate of interest at present, while a general expectation of a fall in purchasing power will raise the rate.[28]

There is a fatal defect in this generally accepted line of reasoning. Suppose, for example, that prices are generally expected to fall by 50% in the next year. Would someone lend 100 gold ounces to exchange for 53 ounces one year from now? Why not? This would certainly preserve the real interest rate at 5%. But then why should the would-be lenders not simply hold on to their money and *double* their real assets as a result of the price fall? And that is precisely what they would do; they certainly would not give money away, even though their real assets would be greater than before. Fisher simply shrugged off this point by saying that the purchasing-power premium could never make the interest rate negative. But this flaw vitiates the entire theory.

The root of the difficulty consists in ignoring the natural rate of interest. Let us consider the interest rate in those terms. Then, suppose 100 ounces are paid for factors that will be transformed in one year into a product that sells for 105 gold ounces, for an interest gain of 5 and an interest return of 5%. Now a general expectation arises of a general *halving* of prices one year from now. The selling price of the product will be 53 ounces in a year's time. What happens now? Will entrepreneurs buy factors for 100 and sell at 53 merely because their real interest rate is preserved? Certainly not. They will do so only if they do not at all anticipate the change in purchasing power. But to the extent that it *is* anticipated, they will hold money rather than buy factors. This will *immediately* lower factor prices to their expected future levels, say from 100 to 50.

What happens to the *loan rate* is analytically quite trivial. It is simply a reflection of the natural rate and depends on how the expectations and judgment of the people on the loan market compare with those on the stock and other markets. For the free economy, there is no point in separately analyzing the loan market. Analysis of the Fisher problem—the relation of the interest rate to price changes—should concentrate on the *natural* rate of interest. Discussion of the relation between price movements and the (natural) rate of interest should be divided into two parts;

first, assuming "neutral money"—that all prices change equally and at the same time—and second, analyzing conditions where factor and product change at different rates. And these changes should first be analyzed without considering that they had been *anticipated* by people on the market.

Suppose, first, that all prices change equally and at the same time. Instead of thinking in terms of 100 ounces borrowed on the loan market, let us consider the natural rate. An investor buys factors in period 1 and then sells the product, say in period 3. Time, as we have seen, is the essence of the production structure. All the processes take time, and capitalists pay money to owners of factors in advance of production and sale. Since factors are bought before products are sold, what is the effect of a period of rising general prices (i.e., falling PPM)? The result is that the entrepreneur reaps an apparent extra profit. Suppose that he normally purchases original factors for 100 and then sells the product for 120 ounces two years later, for an interest return of 10% per annum. Now suppose that a decrease in the demand for money or an increase of money stock propels a general upward movement in prices and that all prices double in two years' time. Then, just because of the passage of time, an entrepreneur who purchases factors for 100 now will sell for 240 ounces in two years' time. Instead of a net return of 20 ounces, or 10% per annum, he reaps 140 ounces, or 70% per annum.

It would seem that a rise in prices creates an inherent tendency for large-scale profits that are not simply individual rewards for more accurate forecasting. However, more careful analysis reveals that this is not an extra profit at all. For the 240 ounces two years from now is roughly equivalent, in terms of purchasing power, to 120 ounces now. The *real* rate of net return, based on money's services, is the same 10% as it has always been. It is clear that any lower net return would amount to a decline in real return. A return of a mere 120 ounces, for example, would amount to a drastic negative real return, for 100 ounces would then be invested for the equivalent gross return of only 60 ounces. It has often been shown that a period of rising prices misleads businessmen into thinking that their increased money profits are also real gains, whereas they only maintain real rates of return. Consider, for example, "replacement costs"—the prices which the businessmen will *now* have to pay for factors. The capitalist who earns 240 ounces on a 100-ounce investment neglects to his sorrow the fact that his factor bundle now costs 200 ounces instead of 100. Businessmen who under such circumstances treat their monetary profits as real profits and consume them soon find that they are really consuming their capital.

The converse occurs in the case of falling prices. The capitalist buys factors in period 1 and sells the product in period 3, when all-around prices are lower. If prices are to fall by a half in two years, an investment of 100, followed by a sale at 60, does not really involve the terrific loss that it appears to be. For the 60 return is equivalent in real terms, both in generalized purchasing power and in replacement of factors, to 120 previous ounces. His real rate of return remains the same. The consequence is that businessmen will be likely to *overstate their losses* in a period of price contraction. Perhaps this is one of the major reasons for the deep-seated belief of most businessmen that they always gain during a general price expansion and lose during a period of general contraction. This belief is purely illusory.

In these examples, the natural interest rate on the market has contained a *purchasing-power component,* which corrects for real rates, positively in money terms during a general expansion, and negatively during a general contraction. The loan rate will be simply a reflection of what has been happening in the natural rate. So far, the discussion is similar to Fisher's, except that these are the effects of *actual,* not anticipated, changes and the Fisher thesis cannot take account of the negative interest rate case. We have seen that rather than take a monetary loss, even though their real return will be the same, entrepreneurs will hold back their purchases of factors until factor prices fall immediately to their future low level. But this process of anticipatory price movement does not occur only in the extreme case of a prospective "negative" return. *It happens whenever a price change is anticipated.* Thus, suppose all entrepreneurs generally anticipate that prices will double in two years. The fact of an anticipated rise will lead to an increase in the price level *now* and an approach immediately toward a doubled price level. An anticipated fall will lead to an immediate fall in factor prices. If all changes were anticipated by everyone, there would be no room for a purchasing-power component to develop. Prices would simply fall immediately to their future level.

The purchasing-power component, then, is *not* the reflection, as has been thought, of *expectations* of changes in purchasing power. It is the reflection of the change itself; indeed, *if the change were completely anticipated, the purchasing power would change immediately, and there would be no room for a purchasing-power component in the rate of interest.* As it is, partial anticipations speed up the adjustment of the PPM to the changed conditions.

So far we have distinguished three components of the natural rate of interest (all reflected in the loan rate of interest). One is the *pure rate* of interest—the result of individual time preferences, tending to be uniform throughout the economy. Second are the specific entrepreneurial rates of interest. These differ from firm to firm and so are not uniform. They are anticipated in advance, and they are the rates that an investor will have to anticipate receiving before he enters the field. A particularly "risky" venture, if successful at all, will therefore tend to earn more in net return than what is generally anticipated to be a "safe" venture. The third component of the natural rate of interest is the purchasing-power component, correcting for general PPM changes because of the inevitable time lags in production. This will be positive in an expansion and negative in a contraction, but will be ephemeral. The more that changes in the PPM are anticipated, the *less* important will be the purchasing-power component and the more rapid will be the adjustment in the PPM *itself.*

There is still a fourth component in the natural rate of interest. This exists to the extent that money changes are *not* neutral (and they never are). Sometimes product prices rise and fall faster than factor prices, sometimes they rise and fall more slowly, and sometimes their behavior is mixed, with some factor prices and some product prices rising more rapidly. Whenever there *is* a general divergence in rates of movement between the prices of the product and of original factors, a *terms-of-trade* component emerges in the natural rate of interest.

Historically, it has often been the case that product prices rise more rapidly and fall more rapidly than the prices of original factors. In the former case, there is, during the period of transition, a favorable change in the terms of trade to the general run of capitalists. For selling prices are increasing *faster* than the buying prices of original factors. This will increase the general rate of return and constitute a general positive terms-of-trade component in the natural rate of interest. This, of course, will also tend to be reflected in the loan rate of interest. In the case of a contraction, a more sluggish fall in the prices of factors creates a general negative terms-of-trade component in the interest rate. The components are precisely the reverse whenever factor prices change more rapidly than product prices. Whenever there is no general change in the "terms of trade" to capitalist-entrepreneurs, no terms-of-trade component will appear in the interest rate.

Changes in terms of trade discussed here are only those resulting purely from differences in the speed of reaction to changing conditions. They do *not* include basic changes in the terms of trade resulting from changes in time preferences, such as we have discussed above.

It is clear that all the interest-rate components aside from the pure rate—entrepreneurial, purchasing power, and terms of trade—are "dynamic" and the result of uncertainty. None of these components would exist in the ERE, and therefore the market interest rate in the ERE would equal the pure rate determined by time preferences alone. In the ERE the only net incomes would be a uniform pure interest return and wages to labor (ground land rents being capitalized into an interest return).

6. *The Supply of Money*

A. THE STOCK OF THE MONEY COMMODITY

The total stock of money in a society is the total number of ounces of the money commodity available. Throughout this volume we have deliberately used "gold ounces" instead of "dollars" or any other name for money, precisely because on the free market the latter would only be a confusing term for *units of weight* of gold or silver.

The total stock, from one period to another, will increase from new production and decrease from being used up—either in industrial production as a nonmonetary factor or from the wear and tear of coins. Since one of the qualities of the money commodity is its durability, the usual tendency is a long-run increase in the money supply and a resulting gradual long-run decline in the PPM. This furthers social utility only in so far as more gold or silver is made available for *nonmonetary* purposes.

We saw in chapter 3 that the physical form of the monetary commodity makes no difference. It can be in nonmonetary use as jewelry, in the form of bars of bullion, or in the form of coins. On the free market, transforming gold from one shape to another would be a business like any other business, charging a market price for its service and earning a pure interest return in the ERE. Since gold begins as bullion and ends as coin, it would seem that the latter would command a small premium over the equivalent weight of the former, the bullion often being a capital good for coin. Sometimes, however, coins are remelted back into bullion for larger transactions, so that a premium for coin over bullion is not a certainty. If, as generally happens, minting coins costs more than melting, coins will command the equivalent premium over bullion. This premium is called *brassage.*

It is impossible for economics to predict the details of the structure of any market. The market for privately issued gold bars or coins might develop as homogeneous, like the market for wheat, or the coins might be stamped and branded by the coinmakers to certify to the quality of their product. Probably the public would buy only branded coins to insure accurate quality.

One argument against permitting free private coinage is that compulsory standardization of the denominations of coins is more convenient than the diversity of coins that would ensue under a free system. But if the market finds it more convenient, private mints will be led by consumer demand to mint certain standard denominations. On the other hand, if greater variety is preferred, consumers will demand and obtain a more varied number of coins.[29]

B. CLAIMS TO MONEY: THE MONEY WAREHOUSE

Chapter 2 described the difference between "claims to present goods" and "claims to future goods." The same analysis applies to money as to barter. A claim to future money is a *bill of exchange*—an evidence of a credit transaction. The holder of the bill—the creditor—redeems it at the date of redemption in exchange for money paid by the debtor. A claim to present money, however, is a completely different good. It is *not* the evidence of an *uncompleted* transaction, an exchange of a present for a future good, as is the bill; it is a simple *evidence of ownership of a present good.* It is not uncompleted, or an exchange on the time market. Therefore, to present this evidence for redemption is not the *completion* of a transaction or equivalent to a creditor's calling his loan; it is a simple *repossessing* of a man's own good. In chapter 2 we gave as examples of a claim to present goods warehouse receipts and shares of stock. Shares of stock, however, cannot be redeemed in parts of a company's fixed assets because of the rules of ownership that the companies themselves set up in their co-operative venture. Furthermore, there is no guarantee that such assets will have a fixed money value. We shall therefore confine ourselves to *warehouse receipts,* which are also more relevant to the supply of money.

When a man deposits goods at a warehouse, he is given a receipt and pays the owner of the warehouse a certain sum for the service of storage. He still retains ownership of the property; the owner of the warehouse is simply guarding it for him. When the warehouse receipt is presented, the owner is obligated to restore the good deposited. A warehouse specializing in money is known as a "bank."

Claims to goods are often treated on the market as equivalent to the goods themselves. If no fraud or theft is suspected, then evidence of ownership of a good in a warehouse is considered as equivalent to the good itself. In many cases, individuals will find it advantageous to exchange the claims or evidences—the *goods-substitutes*—rather than the goods themselves. Paper is more convenient to transfer from person to person, and the expense of moving the goods is eliminated. When Jones sells Smith his wheat, therefore, instead of moving the wheat from one place to another, they may well agree simply to transfer the warehouse receipt itself from Jones to Smith. The goods remain in the same warehouse until Smith needs them or until the receipt is transferred to someone else. Of course, Smith may prefer, for one reason or another, to keep the goods in his own warehouse, in which case they are moved from one to the other.

Let us take the case of a warehouse owned by the Trustee Warehouse Company. It holds various goods in its vaults for safekeeping. Suppose that this company has developed a reputation for being very reliable and theft-free. Consequently, people tend to leave their goods in the Trustee Warehouse for a considerable length of time and, in the case of goods that they do not use frequently, will even tend to transfer the *goods-certificates* (the warehouse receipts, or evidences of ownership of the goods) and not redeem the goods themselves. Thus, the goods-certificates act as goods-substitutes in exchange. Suppose that the Trustee Company sees this happening. It realizes that a good opportunity for fraud presents itself. It can take the depositors' goods, the goods that it holds for safekeeping, and lend them out to people on the market. It can earn interest on these loans, and as long as only a small percentage of depositors ask to redeem their certificates at any one time, no one is the wiser. Or, alternatively, it can issue pseudo warehouse receipts for goods that are not there and lend these on the market. This is the more subtle practice. The pseudo receipts will be exchanged on the market on the same basis as the true receipts, since there is no indication on their face whether they are legitimate or not.

It should be clear that this practice is outright fraud. Someone else's property is taken by the warehouse and used for its own money-making purposes. It is not *borrowed,* since no interest is paid for the use of the money. Or, if spurious warehouse receipts are printed, *evidences of goods* are issued and sold or loaned without any such goods being in existence.

Money is the good most susceptible to these practices. For money, as we have seen, is generally not used directly at all, but only for exchanges. It is, furthermore, a widely homogeneous good, and therefore one ounce of gold is interchangeable with any other. Since it is convenient to transfer paper in exchange rather than carry gold, money warehouses (or banks) that build up public confidence will find that few people redeem their certificates. The banks will be particularly subject to the temptation to commit fraud and issue pseudo money certificates to circulate side by side with genuine money certificates as acceptable money-substitutes. The fact that money is a homogeneous good means that people do not care whether the money they redeem is the original money they deposited. This makes bank frauds easier to accomplish.

"Fraud" is a harsh term, but an accurate one to describe this practice, even if not recognized as such in the law, or by those committing it. It is, in fact, difficult to see the economic or moral difference between the issuance of pseudo receipts and the appropriation of someone else's property or outright embezzlement or, more directly, counterfeiting. Most present legal systems do not outlaw this practice; in fact, it is considered basic banking procedure. Yet the libertarian law of the free market would have to prohibit it. The purely free market is, by definition, one where theft and fraud (implicit theft) are illegal and do not exist.

To part with goods or money held in trust or to issue spurious warehouse receipts is, of course, a dangerous business, even when the law permits it. If the warehouse once failed to meet its contractual obligations, its fraud would be discovered, and a general panic "run" on the warehouse or bank would ensue. It would then be quickly plunged into bankruptcy. Such a bankruptcy, however, would not be similar to the failure of an ordinary speculative business enterprise. It is rather similar to the absconder who gets caught before he has returned the funds he has "borrowed."

Even if the receipt does not say on its face that the warehouse guarantees to keep it in its vaults, such an agreement is *implicit* in the very issuance of the receipt. For it is obvious that if any pseudo receipts are issued, it immediately becomes impossible for the bank to redeem all of them, and therefore fraud is immediately being committed. If a bank has twenty pounds of gold in its vaults, owned by depositors, and gold certificates redeemable on demand for thirty pounds, then notes to the value of ten pounds are fraudulent. *Which* particular receipts are fraudulent can be determined only *after* a run on the bank has occurred and the later claimants are left unsatisfied.

In a purely free market where fraud cannot, by definition, occur, all bank receipts will be genuine, i.e., will represent only actual gold or silver in the vaults. In that case, all the bank's *money-substitutes* (warehouse receipts) will also be *money certificates,* i.e., each receipt genuinely certifies the actual existence of the money in its vaults. The amount of gold kept in bank vaults for redemption purposes is called its "reserves," and the policy of issuing only genuine receipts is therefore a policy of "100% reserves" of cash to demand liabilities (liabilities that must be paid on demand).[30] However, the term "reserve" is a misleading one, because it assumes that the *bank* owns the gold and independently decides how much of it to keep on hand. Actually, it is not the bank that owns the gold, but its depositors.[31]

An enormous literature has developed dealing with the physical form of the money receipts, and yet the physical form is of no economic importance. It may be in the form of a *paper note,* a *token coin* (essentially a note stamped on coin instead of paper), or a book credit (*demand deposit*) in the bank. The demand deposit is not tangibly held by the owner, but can be transferred to anyone he desires by written order to the bank. This order is called a *check.* The depositor has a choice of which form of receipt to take, according to his convenience. Which form he chooses makes no economic difference.

C. MONEY-SUBSTITUTES AND THE SUPPLY OF MONEY

Since money-substitutes exchange as money on the market, we must consider them as part of the supply of money. It then becomes necessary to distinguish between money (*in the broader sense*)—the common medium of exchange—and *money proper.* Money proper is the ultimate medium of exchange or *standard money*—here the *money commodity*—while the supply of money (in a broader sense) includes all the standard money plus the money-substitutes that are held in individuals' cash balances. In the cases cited above, gold was the money proper or standard money, while the receipts—the demand claims to gold—were the money-substitutes.

The relation between these elements may be illustrated as follows: Assume a community of three persons, A, B, C, and three money warehouses, X, Y, Z. Suppose that each person has 100 ounces of gold in his possession and none on deposit at a warehouse. For the community, then:

Total supply of money proper	= 300 ounces (A's + B's + C's)
Total supply of money-substitutes	= 000 ounces
Total supply of money (in the broader sense)	= 300 ounces

The total supply of money is here identical with the total supply of money proper.

Now assume that A and B each deposits his 100 ounces of gold at warehouses X and Y respectively, while C keeps his gold on hand. The total supply of money is always equal to the total of individual cash balances. Its composition now is:

A—100 ounces of X-Money-Substitute
B—100 ounces of Y-Money-Substitute
C—100 ounces of Gold Money Proper

Total supply of money (in the broader sense) = Total cash balances = 200 ounces of money-substitutes + 100 ounces of money proper.

The effect of the deposit of money proper in the warehouses or banks is to change the *composition* of the total supply of money in cash balances; the total amount, however, remains unchanged at 300 ounces. Money-substitutes of various banks have replaced most of the standard money in individual cash holdings. Similarly, if A and B were to redeem their deposits, the total amount would remain unchanged, while the composition would revert to the original pattern.

What of the 200 ounces of gold deposited in the vaults of the banks? These are no longer part of the money supply; they are held in *reserve* against the outstanding money-substitutes. While in reserve, they form no part of any individual's cash balance; the cash balances consist not of the gold, but of evidences of ownership of the gold. Only the money proper outside of bank reserves forms part of individuals' cash balances and hence part of the community's supply of money.

Thus, as long as all money-substitutes are full money certificates, an increase or decrease in the money-substitutes outstanding can have no effect on the total supply of money. Only the *composition* of that supply is affected, and such changes in composition are of no economic importance.

However, when banks are legally permitted to abandon a 100% reserve and to issue pseudo receipts, the economic effects are quite different. We may call the money-substitutes that are not genuine money certificates, *uncovered* money-substitutes, since they do not genuinely represent money. The issue of uncovered money-substitutes adds to individuals' cash balances and hence to the total supply of money. Uncovered money-substitutes are not offset by new money deposits and so constitute net additions to the total supply. *Any increase or decrease in the supply of uncovered money-substitutes increases or decreases to the same extent the total supply of money (in the broader sense).*

Thus, the total supply of money is composed of the following elements: *supply of money proper outside reserves + supply of money certificates + supply of uncovered money-substitutes.* The supply of money certificates has no effect on the size of the supply of money; an increase in this factor only decreases the size of the first factor. The supply of money proper and the factors determining its size have already been discussed. It depends on annual production compared to annual wear and tear, and thus, on the unhampered market, the supply of money-proper changes only slowly. As for uncovered money-substitutes, since they are essentially a phenomenon of the hampered rather than the free market, factors governing their supply will be further discussed below, in chapter 12.

In the meanwhile, however, let us analyze a little further the difference between a 100%-reserve and a fractional-reserve bank. The Star Bank, let us suppose, is a 100%-reserve bank; it is established with 100 gold ounces of capital invested by its stockholders in building and equipment. In the familiar balance sheet, with assets on the left-hand side and liabilities and capital on the right-hand side, the condition of the bank now appears as follows:

I. Star Bank

Assets		Liabilities	
Equipment	100 oz.		
		Capital	100 oz.

The Star Bank is ready to begin operations. Several people now come and deposit gold in the bank, which in return issues warehouse receipts giving the depositors (the true owners of the gold) the right to redeem their property on demand at any time. Let us assume that after a few months 5,000 gold ounces have been deposited and stored in the bank's vaults. Its balance sheet now appears as follows:

II. Star Bank

Assets		Liabilities	
Gold	5,000 oz.	Warehouse Receipts	5,000 oz.
Equipment	100 oz.		
	5,100 oz.		
		Capital	100 oz.
			5,100 oz.

The warehouse receipts function and exchange as money-substitutes, *replacing,* not adding to, the gold stored in the bank. All the warehouse receipts are money certificates, 100% reserve has been maintained, and no invasion of the free market has occurred. The warehouse receipts may take the form of printed tickets (notes) or book credit (demand deposits) transferable by written order or "check." The two are economically identical.

But now suppose that law enforcement is lax and the bank sees that it can make money easily by engaging in fraud, i.e., by lending some of the depositors' gold (or, rather, issuing pseudo warehouse receipts for nonexistent gold and lending them) to people who wish to borrow it.[32] Let us say that the Star Bank, chafing at the mere interest return earned on its fees for warehouse service, prints 1,000 ounces of pseudo warehouse receipts and lends them on the credit market to businesses and consumers who desire to borrow money. The balance sheet of the Star Bank is now as follows:

III. Star Bank

Assets		Liabilities	
Gold	5,000 oz.	Warehouse Receipts	6,000 oz.
IOU's from debtors	1,000 oz.		
Equipment	100 oz.		
	6,100 oz.		
		Capital	100 oz.
			6,100 oz.

The warehouse receipts still function as money-substitutes on the market. And we see that new money has been created by the bank out of thin air, as if by magic. This process of money creation has also been called the "monetization of debt," an apt term since it describes the only instance where a *liability* can be transformed into money—the supreme *asset.* It is obvious that the more money the bank creates, the more profits it will earn, for any income earned on newly created money is a pure unalloyed gain. The bank has been able to alter the conditions of the free market system, in which money can be obtained only by purchase, mining, or gift. In each of these routes, productive service—either one's own or one's ancestor's or benefactor's—was necessary in order to obtain money. The bank's inflationary intervention has created another route to money: the creation of new money out of thin air, by issuing receipts for nonexistent gold.[33, 34]

D. A NOTE ON SOME CRITICISMS OF 100% RESERVE

One popular criticism of 100% bank reserves charges that the bank could not then earn any income or cover costs of storage, printing, etc. On the contrary, a bank is perfectly capable of operating like any goods warehouse, i.e., by charging its customers for its services to them and reaping the usual interest return on its operations.

Another popular objection is that a 100%-reserve policy would eliminate all credit. How would businessmen be able to borrow funds for short-term investment? The answer is that businessmen can still borrow *saved funds* from any individual or institution. "Banks" may still lend their own saved funds (capital stock and accumulated surplus) or they may borrow funds from individuals and relend them to business firms, earning the interest differential.[35] Borrowing money (e.g., floating a bond) is a credit transaction; an individual exchanges his present money for a bond—a claim on future money. The borrowing bank pays him interest for this loan and in turn exchanges the money thus gathered for promises by business borrowers to pay money in the future. This is a further credit transaction, in this case the bank acting as the lender and businesses as the borrowers. The bank's income is the interest differential between the two types of credit transactions; the payment is for the services of the bank as an intermediary, channeling the savings of the public into investment. There is, furthermore, no particular reason why the *short-term,* more than any other, credit market should be subsidized by money creation.

Finally, an important criticism of a governmentally enforced policy of 100% reserves is that this measure, though beneficial in itself, would establish a precedent for other governmental intervention in the monetary system, including a change in this very requirement by government edict. These critics advocate "free banking," i.e., no governmental interference with banking apart from enforcing payment of obligations, the banks to be permitted to engage in any fictitious issues they desire. Yet the free market does not mean freedom to commit fraud or any other form of theft. Quite the contrary. The criticism may be obviated by imposing a 100%-reserve requirement, not as an arbitrary administrative fiat of the government, but as part of the general legal defense of property against fraud. As Jevons stated: "It used to be held as a general rule of law, that any present grant or assignment of goods not in existence is without operation," [36] and this general rule need only be revived and enforced to outlaw fictitious money-substitutes. Then banking could be left perfectly free and yet be without departure from 100% reserves.[37]

7. *Gains and Losses during a Change in the Money Relation*

A change in the money relation necessarily involves gains and losses because money is not neutral and price changes do not take place simultaneously. Let us assume—and this will rarely hold in practice—that the final equilibrium position resulting from a change in the money relation is the same in all respects (including relative prices, individual values, etc.) as the previous equilibrium, except for the change in the purchasing power of money. Actually, as we shall see, there will almost undoubtedly be many changes in these factors in the new equilibrium situation. But even if there is not, the *movement* of prices from one equilibrium position to the next will not take place smoothly and simultaneously. It will *not* take place according to the famous example of David Hume and John Stuart Mill, where everyone awakens to find his money supply doubled overnight. Changes in the demand for money or the stock of money occur in step-by-step fashion, first having their effect in one area of the economy and then in the next. Because the market is a complex interacting network, and because some people react more quickly than others, movements of prices will differ in the speed of reaction to the changed situation.

As we have intimated above, the following law can be enunciated: When a change in the money relation causes prices to rise, the man whose selling price rises before his buying prices gains, and the man whose buying prices rise first, loses. The one who gains the most from the transition period is the one whose selling price rises first and buying prices last. Conversely, when prices fall, the man whose buying prices fall before his selling price gains, and the man whose selling price falls before his buying prices, loses.

It should be evident, in the first place, that there is nothing about rising prices that causes gains or about falling prices that causes losses. In either situation, some people gain and some people lose from the change, the gainers being the ones with the greatest and lengthiest positive differential between their selling and their buying prices, and the losers the ones with the greatest and longest negative differential in these movements. Which people gain and which lose from any given change is an empirical question, dependent on the location of changes in elements of the money relation, institutional conditions, anticipations, speeds of reaction, etc.

Let us consider the gains and losses from an increase in money stock. Suppose that we start from a position of monetary equilibrium. Every person's money relation is in equilibrium, with his stock of and demand for money being equal. Now suppose that Mr. Jones finds some new gold never known before. A change in Jones' data has taken place. He now has an excess stock of gold in his cash balance compared with his demand for it. Jones acts to spend his excess cash balance. This new money is spent, let us say, on the products of Smith. Smith now finds that his cash balance exceeds his demand for money, and he spends his excess on the products of someone else.

Jones' increased supply also increases Smith's selling price and income. Smith's selling price has increased before his buying price. He spends the money on the products of Robinson, thus raising the latter's selling prices while most buying prices have not risen. As the money is transferred from hand to hand, buying prices rise more and more. Robinson's selling price increases, for example, but already one of the products he buys—Smith's—has gone up. As the process continues, more and more buying prices rise. The individuals who are far down "on the list" to receive the new money, therefore, find that their buying prices have increased while their selling prices have not yet done so.

Of course, the changes in the money supply and in prices may well be insignificant. But this process occurs, however large or small the change in the money stock. Obviously, the larger the increase in money stock, the greater, *ceteris paribus,* will be its impact on prices.

We have seen above that an increase in the stock of money leads to a fall in the PPM, and a decrease in the stock of money leads to a rise in the PPM. However, there is no simple and uneventful rise and fall in the PPM. For a change in the stock of money is not automatically simultaneous. *New money enters the system at some specific point* and then becomes diffused in this way throughout the economy. The individuals who receive the new money first are the greatest gainers from the increased money; those who receive it last are the greatest losers, since all their buying prices have increased before their selling prices. Monetarily, it is clear that the gains of the approximate first half of the recipients of new money are exactly counterbalanced by the losses of the second half. Conversely, if money should somehow disappear from the system, say through wear and tear or through being misplaced, the initial loser cuts his spending and suffers most, while the last who feel the impact of a decreased money supply gain the most. For a decrease in the money supply results in losses for the first owners, who suffer a cut in selling price before their buying prices are lowered, and gains for the last, who see their buying prices fall before their income is cut.[38]

This analysis bears out our assertion above that there is no social utility in an increased supply, nor any social disutility in a decreased supply, of money. This is true for the transition period as well. An increase in gold is socially useful (i.e., beneficial to some without demonstrably injuring others) only to the extent that it makes possible an increase in the nonmonetary, direct use of gold.

If, as we have been assuming, relative prices and valuations remain the same for all throughout, the new equilibrium will be identical with the old except for an all-round price change. In that case, the gains and losses will be temporary, disappearing upon the advent of the new equilibrium. Actually, however, this will almost never occur. For even if people's values remain frozen, the shift in relative money income during the transition itself changes the structure of demand. The gainers of wealth during the transition period will have a structure of preferences and demand different from that of the losers. As a result, demand itself will shift in structure, and the new equilibrium will have a different set of relative prices. Similarly, the change will probably not be neutral to time preferences. The permanent gainers will undoubtedly have a different structure of time preferences from that of the permanent losers, and, as a result, there may be a permanent shift in general time preferences. What the shift will be or in which direction, it is of course impossible for economics to say.

Money changes have this "driving force," it may be noted, even in the fanciful case of the automatic overnight doubling of the supply of everyone's cash balance. For the fact that everyone's money stock doubles does not at all mean that *all prices* will automatically double! Each individual has a differently shaped demand-for-money schedule, and it is impossible to predict *how* each will be shaped. Some will spend proportionately more of their new money, and others will keep proportionately more in their cash balance. Many people will tend to spend their new cash balances on different goods from those they had bought with their old money. As a result, the structure of demand will change, and a decreased PPM will not double all prices; some will increase by more and some by less than double.[39]

8. *The Determination of Prices: The Goods Side and the Money Side*

We are now in a position to draw together all the strands determining the prices of goods. In chapters 4 through 9 we analyzed all the determinants of the prices of particular goods. In this chapter we have analyzed the determination of the purchasing power of money. Now we can see how both sets of determinants blend together.

A particular price, as we have seen, is determined by the total demand for the good (exchange and reservation) and the stock of the good, increasing as the former increases and decreasing as the latter increases. We may therefore call the demand a "factor of increase" of the price, and the stock a "factor of decrease." The *exchange* demand for each good—the amount of money that will be spent in exchange for the good—equals the stock of money in the society minus the following: the exchange demands for all other goods and the reservation demand for money. In short, the amount spent on X good equals the total money supply minus the amount spent on other goods and the amount kept in cash balances.

Suppose we overlook the difficulties involved and now consider the price of "all goods," i.e., the reciprocal of the purchasing power of money. The price of goods-in-general will now be determined by the monetary demand for all goods (factor of increase) and the stock of all goods (factor of decrease). Now, when all goods are considered, the exchange demand for goods equals the stock of money minus the reservation demand for money. (In contrast to any specific good, there is no need to subtract people's expenditures on *other* goods.) The total demand for goods, then, equals the stock of money minus the reservation demand for money, plus the reservation demand for all goods.

The ultimate determinants of the price of all goods are: the stock of money and the reservation demand for goods (factors of increase), and the stock of all goods and the reservation demand for money (factors of decrease). Now let us consider the obverse side: the PPM. The PPM, as we have seen, is determined by the demand for money (factor of increase) and the stock of money (factor of decrease). The exchange demand for money equals the stock of all goods minus the reservation demand for all goods. Therefore, the ultimate determinants of the PPM are: the stock of all goods and the reservation demand for money (factors of increase), and the stock of money and the reservation demand for goods (factors of decrease). We see that this is the exact obverse of the determinants of the price of all goods, which, in turn, is the reciprocal of the PPM.

Thus, the analysis of the money side and the goods side of prices is completely harmonious. No longer is there need for an arbitrary division between a barter-type analysis of relative goods-prices and a holistic analysis of the PPM. Whether we treat one good or all goods, the price or prices will *increase, ceteris paribus,* if the stock of money increases; *decrease* when the stock of the good or goods increases; *decrease* when the reservation demand for money increases; and *increase* when the reservation demand for the good or goods increases. For each individual good, the price will also increase when the specific demand for that good increases; but unless this is a reflection of a drop in the social reservation demand for money, this changed demand will also signify a decreased demand for some other good, and a consequent fall in the price of the latter. Hence, changes in specific demands will not change the value of the PPM.

In a progressing economy, the secular trend for the four determining factors is likely to be: the *money stock* increasing gradually as gold production adds to the previous total; the *stock of goods* increasing as capital investment accumulates; the *reservation demand for goods* disappearing because short-run speculations disappear over the long run, and this is the main reason for such a demand; the *reservation demand for money* unknown, with clearing, for example, working to reduce this demand over a period of time, and the greater number of transactions tending to increase it. The result is that we cannot precisely say how the PPM will move in a progressing economy, though the best summary guess would be that it declines as a result of the influence of the increased stock of goods. Certainly, the influence of the *goods* side is in the direction of falling prices; the money side we cannot predict.

Thus, the ultimate determinants of the PPM as well as of specific prices are the subjective *utilities* of individuals (the determinants of demand) and the given objective stocks of goods—

thereby vindicating the Austrian-Wicksteedian theory of price for all aspects of the economic system.

A final note of warning: It is necessary to remember that *money can never be neutral.* One set of conditions tending to raise the PPM can never precisely offset another set of factors tending to lower it. Thus, suppose that an increase in the stock of goods tends to raise the PPM, while at the same time, an increase in the money supply tends to lower it. One change can never offset the other; for one change will lower one set of prices more than others, while the other will raise a different set within the whole array of prices. The degrees of change in the two cases will depend on the particular goods and individuals affected and on their concrete valuations. Thus, even if we can make an historical (*not* an economic-scientific) judgment that the PPM has remained roughly the same, the price relations have shifted within the array, and therefore the judgment can never be exact.

9. *Interlocal Exchange*

A. UNIFORMITY OF THE GEOGRAPHIC PURCHASING POWER OF MONEY

The price of any commodity tends to be the same throughout the entire area using it. We have seen that this rule is not violated by the fact that cotton in Georgia, for example, is priced lower than cotton in New York. When cotton in New York is a consumers' good, cotton in Georgia is a *capital good* in relation to the former. Cotton in Georgia is not the same commodity as cotton in New York because goods must first be processed in one location and then transported to the places where they are consumed.

Money is no exception to the rule that the price of every commodity will tend to be uniform throughout the entire area in which it is used. In fact, the scope for the money commodity is broader. Other commodities are produced in certain centers and must then be transported to other centers where they are consumed. They are therefore not the same "good" in different geographical locations; in the producing centers they are *capital goods*. Money, it is true, must first be mined and then shipped to places of use. But, once mined, the money commodity is used only for exchange. For these purposes, it is from then on shipped back and forth throughout the world market. Therefore, there is no really important capital-good location for money separate from a consumers'-good location. Whereas all other goods are first produced and then moved to the place where they are used and consumed, money is used interchangeably throughout the entire market area, moving back and forth. Therefore, the tendency toward geographical uniformity in the purchasing power of money holds true for the physical commodity gold or silver, and there is no need for that commodity to be treated as a different good in one place or another.

The purchasing power of money will therefore be identical over the entire area. Should the PPM be lower in New York than in Detroit, the supply of money for the exchange of goods will diminish in New York and increase in Detroit. Prices of goods being higher in New York than in Detroit, people will spend less in New York and more in Detroit than heretofore, this shift being reflected in the movement of money. This action will tend to raise the purchasing power of money in New York and lower it in Detroit, until its purchasing power in the two places is equal. The purchasing power of money will, in this way, tend to remain equal in all places where the money is used, whether or not national boundaries happen to intervene.

Some people contend that, on the contrary, there *do* exist permanent differences in the purchasing power of money from place to place. For example, they point to the fact that prices for food in restaurants are higher in New York City than in Peoria. For most people, however, New York has certain definite advantages over Peoria. It has a vastly wider range of goods and services available to the consumer, including theaters, concerts, colleges, high-quality jewelry and clothing, and stockbrokerage houses. There is a great difference between the commodity "restaurant service in New York" and the commodity "restaurant service in Peoria." The former allows the purchaser to remain in New York and to enjoy its various advantages. Thus, the two are distinct goods, and the fact that the price of restaurant service is greater in New York signifies that the preponderance of individuals on the market value the former more highly and consider it a commodity of higher quality.[40]

Costs of transport, however, do introduce a qualification into this analysis. Suppose that the PPM in Detroit is slightly higher than in Rochester. We would expect gold to flow from Rochester to Detroit, spending relatively more on goods in the latter place, until the PPM's are equalized. If, however, the PPM in Detroit is higher by an amount smaller than the transport cost of shipping the gold from Rochester, then relative PPM's have a leeway to differ within the zone of shipping costs of gold. It would then be too expensive to ship gold to Detroit to take advantage of the higher PPM. The interspatial PPM's may vary in either direction within this cost-of-transport margin.[41]

Many critics allege that the PPM cannot be *uniform* throughout the world because some goods are not transferable from one locale to another. Times Square or Niagara Falls, for example, cannot be transferred from one region to another; they are specific to their locale. Therefore, it is alleged, the equalization process can take place only for those goods which "enter into interregional trade"; it does not apply to the general PPM.

Plausible as it seems, this objection is completely fallacious. In the first place, disparate goods like Times Square and other main streets are *different goods,* so that there is no reason to expect them to have the same price. Secondly, so long as *one* commodity can be traded, the PPM can be equalized. The *composition* of the PPM may well be changed, but this does not refute the fact of equalization. The process of equalization can be deduced from the fact of human action, even though, as we shall see, the PPM cannot be *measured,* since its composition does not remain the same.

Finally, since any good *can* be traded, what is there to prevent, for example, Oshkosh capital from buying a building on Times Square? The Oshkosh capitalists need not literally transport a good back to Oshkosh in order to buy it and make money from their investment. Every good, then, "enters into interregional trade"; no distinction between "domestic" and "interregional" (or "international") goods can be made.

Thus, suppose the PPM is higher in Oshkosh than in New York. New Yorkers tend to buy more in Oshkosh, and Oshkoshians will buy less in New York. This does not only mean that New York will buy more Oshkosh wheat, or that Oshkosh will buy less New York clothing. It also means that New Yorkers will invest in real estate or theaters in Oshkosh, while Oshkoshians will sell some of their New York holdings.

B. CLEARING IN INTERLOCAL EXCHANGE

Clearing is particularly appropriate for interlocal transactions, since costs of transporting money from one locale to another are likely to be heavy. Bills of exchange on each town (i.e., IOU's owed by each town) can be reciprocally canceled. Suppose that there are two traders, A and B in Detroit, and two in Rochester, C and D. A sells C a refrigerator for 200 gold grams, and D sells B a TV set for 200 grams. The two debts can be cleared, and no money need be shipped from one place to the other. On the other hand, D's sale of a TV set may total 120 grams. Suppose for a moment that these are the only traders in the two communities. Then 80 grams will have to be shipped from Rochester to Detroit. In the latter case, the citizens of Detroit have, on net balance, decided to *add* to their cash holdings, while the Rochesterites have decided to diminish their cash holdings.

Economists have often described interlocal trade in terms of "gold export points" and "gold import points." The use of such expressions assumes, however, that even though two localities both use gold money, it makes sense to talk of an "exchange rate" of the money of one locality for that of another. This exchange rate is set between the margins fixed by the cost of transporting money—the "gold import" and "gold export" points. This does *not* hold true on the free market, however. On such a market, all coins and bullion are expressed in terms of weight of gold, and it makes no sense whatever to speak of an "exchange rate" of the money of one place for the same money in another. How can there be an "exchange rate" of an ounce of gold for an ounce of gold? There will be no legal tender or other laws to separate the value of the coins of one area from those of another. Therefore, there may be slight variations in the PPM in each locale, within the limits of the cost of transporting gold, but there could never be deviations from par in interlocal "exchange rates." For there are no exchange rates on the free market, except for two or more coexisting money commodities.

10. *Balances of Payments*

In chapter 3 above, we engaged in an extensive analysis of the individual's balance of payments. We saw there that an individual's *income* can be called his exports, and the physical sources of his income his *goods exported;* while his expenditures can be termed his *imports,* and the goods purchased his *goods imported.*[42] We also saw that it is nonsensical to call a man's balance of trade "favorable" if he chooses to use some of his income to add to his cash balance, or "unfavorable" if he decides to draw down his cash balance, so that expenditures are greater than income. *Every* action and exchange is favorable from the point of view of the person performing the action or exchange; otherwise he would not have engaged in it. A further conclusion is that there is no need for anyone to worry about anyone else's balance of trade.

A person's income and expenditure constitute his "balance of trade," while his credit transactions, added to this balance, comprise his "balance of payment." Credit transactions may complicate the balance, but they do not alter its essentials. When a creditor makes a loan, he adds to his "money paid" column to the extent of the loan—for purchase of a promise to pay in the future. He has purchased the debtor's promise to pay in exchange for transferring part of his present cash balance to the debtor. The debtor adds to his "money receipts" column—from the sale of a promise to pay in the future. These promises to pay may fall due at any future date decided upon by the creditor and the debtor; generally they range from a day to many years. On that date the debtor repays the loan and transfers part of his cash balance to the creditor. This will appear in the debtor's "money paid" column—for repayment of debt—and in the creditor's "money received" column—from repayment of debt. Interest payments made by the debtor to the creditor will be similarly reflected in the respective balances of payments.

More nonsense has been written about balances of payments than about virtually any other aspect of economics. This has been caused by the failure of economists to ground and build their analysis on *individual* balances of payments. Instead they have employed such cloudy, holistic concepts as the "national" balance of payment without basing them on individual actions and balances.

Balances of payments may be consolidated for many individuals, and any number of groupings may be made. In these cases, the balances of payments *only record the monetary transactions between individuals of the group and other individuals, but fail to record the exchanges of individuals within the group.*

For example, suppose that we take the consolidated balance of payments for the Antlers Lodge of Jonesville for a certain period of time. There are three lodge members A, B and C. Suppose their individual balances of payments are as indicated in Table 16.

In the consolidated balance sheet of the Antlers Lodge, the money payments between the members must of necessity cancel out. Thus,

Consolidated Balance of Payments, Antlers Lodge

Money income from "outsiders" (exports)	75 oz.	Money expenditure on goods to "outsiders" (imports)	78 oz.
Reduction of cash balance for transfer to "outsiders"	3 oz.		
	78 oz.		

The consolidated balance tells less about the activities of the members of the group than do the individual balances, since the

TABLE 16

	A	B	C	CONSOLIDATED
Money income from other lodge members	5 oz.	2 oz.	3 oz.	10 oz.
Money income from "outsiders"	20 oz.	25 oz.	30 oz.	75 oz.
Total Money Income	25 oz.	27 oz.	33 oz.	
Money expenditures on goods of other lodge members	2 oz.	8 oz.	0 oz.	10 oz.
Money expenditures on goods of "outsiders"	22 oz.	23 oz.	33 oz.	78 oz.
Total Money Expenditures	24 oz.	31 oz.	33 oz.	
Changes in Cash Balance	+1 oz.	−4 oz.	0 oz.	−3 oz.

exchanges *within* the group are not revealed. This discrepancy grows as the number of people grouped in the consolidated balance increases. The consolidated balance of the citizens of a large nation such as the United States conveys less information about their economic activities than is revealed by the consolidated balance of the citizens of Cuba. Finally, if we lump together all the citizens of the world engaged in exchange, their consolidated balance of payments is precisely zero. All the exchanges are internal within the group, and the consolidated balance conveys no information whatever about them. Taken together, the people of the world have zero income from "outside" and zero expenditures on "outside goods." [43]

Fallacies in thinking about foreign trade will disappear if we understand that balances of payment are merely built upon consolidated *individual* transactions and that national balances are merely an arbitrary stopping point between individual balances on the one hand and the simple zeros of a world balance of payments on the other. There is, for example, the perennial worry that a balance of trade will be permanently "unfavorable" so that gold will drain out of the region in question until none is left. Drains of gold, however, are not mysterious acts of God. They are *willed* by people, who, on net balance, wish for one reason or another to reduce their cash balances of gold. The state of the balance is simply the visible manifestation of a voluntary reduction in the cash balance in a certain region or among a certain group.

Worries about *national* balances of payment are the fallacious residue of the accident that statistics of exchange are far more available across national boundaries than elsewhere. It should be clear that the principles applying to the balance of payment of the United States are the same for one region of the country, for one state, for one city, for one block, one house, or one person. Obviously no person or group can suffer because of an "unfavorable" balance; he or the group can suffer only because of a low level of income or assets. Seemingly plausible cries that money "be kept in" the United States, that Americans not be flooded with the "products of cheap foreign labor," etc., take on a new perspective when we apply it, say, to a family of three Jones brothers. Imagine each brother exhorting the others to "buy Jones," to "keep the money circulating *within* the Jones family," to abstain from buying products made by others who earn less than the Jones family! Yet the principle of the argument is precisely the same in both cases.

Another popular argument is that a debtor group or nation cannot possibly repay its debt because its "balance of trade is in fundamental disequilibrium, being inherently unfavorable." This is taken seriously in international affairs; yet how would we regard the individual debtor who used this excuse for defaulting on his loan? The creditor would be justified in bluntly telling the debtor that all he is saying is that he would much rather spend his money income and assets on enjoyable goods and services than on repayment of his debt. Except for the usual holistic analysis, we would see that the same holds true for an international debt.

11. *Monetary Attributes of Goods*

A. QUASI MONEY

We saw in chapter 3 how one or more very easily marketable commodities were chosen by the market as media of exchange, thereby greatly increasing their marketability and becoming more and more generally used until they could be called money. We have implicitly assumed that there are one or two media that are fully marketable—always salable—and other commodities that are simply sold for money. We have omitted mention of the *degrees* of marketability of these goods. Some goods are more readily marketable than others. And some are so easily marketable that they rise practically to the status of *quasi moneys.*

Quasi moneys do not form part of the nation's money supply. The conclusive test is that they are not used to settle debts, nor are they claims to such means of payment at par. However, they are held as assets by individuals and are considered so readily marketable that an extra demand arises for them on the market. Their existence lowers the demand for money, since holders can economize on money by keeping them as assets. The price of these goods is higher than otherwise because of their quasi-monetary status.

In Oriental countries jewels have traditionally been held as quasi moneys. In advanced countries quasi moneys are usually short-term debts or securities that have a broad market and are readily salable at the highest price the market will yield. Quasi moneys include high-grade debentures, some stocks, and some wholesale commodities. Debentures used as quasi moneys have a higher price than otherwise and therefore a *lower interest yield than will accrue on other investments.*[44]

B. BILLS OF EXCHANGE

In previous sections we saw that bills of exchange are not money-substitutes, but *credit* instruments. Money-substitutes are claims to *present* money, equivalent to warehouse receipts. But some critics maintain that in Europe at the turn of the nineteenth century bills *did* circulate as money-substitutes. They circulated as final payment in advance of their due dates, their face value discounted for the period of time left for maturity. Yet these were not money-substitutes. The holder of a bill was a creditor. Each of the acceptors of the bill had to endorse its payment, and the credit standing of each endorser had to be examined to judge the soundness of the bill. In short, as Mises has stated:

> The endorsement of the bill is in fact not a final payment; it liberates the debtor to a limited degree only. If the bill is not paid then his liability is revived in a greater degree than before.[45]

Hence, the bills could not be classed as money-substitutes.

12. *Exchange Rates of Coexisting Moneys*

Up to this point we have analyzed the market in terms of a single money and its purchasing power. This analysis is valid for each and every type of medium of exchange existing on the market. But if there is *more* than one medium coexisting on the market, what determines the exchange ratios between the various media? Although on an unhampered market there is a gradual tendency for one single money to be established, this tendency works very slowly. If two or more commodities offer good facilities and are both especially marketable, they may coexist as moneys. Each will be used by people as media of exchange.

For centuries, gold and silver were two commodities that coexisted as moneys. Both had similar advantages in scarcity, desirability for nonmonetary purposes, portability, durability, etc. Gold, however, being relatively far more valuable per unit of weight, was found to be more useful for larger transactions, and silver better for smaller transactions.

It is impossible to predict whether the market would have continued indefinitely to use gold and silver or whether one would have gradually ousted the other as a general medium of exchange. For, in the late nineteenth century, most Western countries conducted a *coup d'état* against silver, to establish a monometallic standard by coercion.[46] Gold and silver could and did coexist side by side in the same countries or throughout the world market, or one could function as money in one country, and one in another. Our analysis of the exchange rate is the same in both cases.

What determines the exchange rate between two (or more) moneys? Two different kinds of money will exchange in a ratio corresponding *to the ratio of the purchasing power of each in terms of all the other economic goods.* Thus, suppose that there are two coexisting moneys, gold and silver, and the purchasing power of gold is double that of silver, i.e., that the money price of every commodity is double in terms of silver what it is in terms of gold. One ounce of gold exchanges for fifty pounds of butter, and one ounce of silver exchanges for twenty-five pounds of butter. One ounce of gold will then tend to exchange for two ounces of silver; the exchange ratio of gold and silver will tend to be 1:2. If the rate at any time deviates from 1:2, market forces will tend to re-establish the parity between the purchasing powers and the exchange rate between them. This equilibrium exchange rate between two moneys is termed the *purchasing power parity.*

Thus, suppose that the exchange rate between gold and silver is 1:3, three ounces of silver exchanging for one ounce of gold. At the same time, the purchasing power of an ounce of gold is *twice* that of silver. It will now pay people to sell commodities for gold, exchange the gold for silver, and then exchange the silver back into commodities, thereby making a clear arbitrage gain. For example, people will sell fifty pounds of butter for one ounce of gold, exchange the gold for three ounces of silver, and then exchange the silver for seventy-five pounds of butter, gaining twenty-five pounds of butter. Similar gains from this arbitrage action will take place for all other commodities.

Arbitrage will restore the exchange rate between silver and gold to its purchasing power parity. The fact that holders of gold increase their demand for silver in order to profit by the arbitrage action will make silver more expensive in terms of gold and, conversely, gold cheaper in terms of silver. The exchange rate is driven in the direction of 1:2. Furthermore, holders of commodities are increasingly demanding gold to take advantage of the arbitrage, and this raises the purchasing power of gold. In addition, holders of silver are buying more commodities to make the arbitrage profit, and this action lowers the purchasing power of silver. Hence the ratio of the purchasing powers moves from 1:2 in the direction of 1:3. The process stops when the exchange rate is again at purchasing power parity, when arbitrage gains cease. Arbitrage gains tend to eliminate themselves and to bring about equilibrium.

It should be noted that, in the long run, the movement in the purchasing powers will probably not be important in the equilibrating process. With the arbitrage gains over, demands will probably revert back to what they were formerly, and the original ratio of purchasing powers will be restored. In the above case, the equilibrium rate will likely remain at 1:2.

Thus, the exchange rate between any two moneys will tend to be at the purchasing power parity. Any deviation from the parity will tend to eliminate itself and re-establish the parity rate. This holds true for any moneys, including those used mainly in different geographical areas. Whether the exchanges of moneys occur between citizens of the same or different geographical areas makes no economic difference, except for the costs of transport. Of course, if the two moneys are used in two completely isolated geographical areas with no exchanges between the inhabitants, then there is no exchange rate between them. Whenever exchanges *do* take place, however, the rate of exchange will always tend to be set at the purchasing power parity.

It is impossible for economics to state whether, if the money market had remained free, gold and silver would have continued to circulate side by side as moneys. There has been in monetary history a curious reluctance to allow moneys to circulate at freely fluctuating exchange ratios. Whether one of the moneys or both would be used as units of account would be up to the market to decide at its convenience.[47]

13. *The Fallacy of the Equation of Exchange*

The basis on which we have been explaining the purchasing power of money and the changes in and consequences of monetary phenomena has been an analysis of individual action. The behavior of aggregates, such as the aggregate demand for money and aggregate supply, has been constructed out of their individual components. In this way, monetary theory has been integrated into general economics. Monetary theory in American economics, however (apart from the Keynesian system, which we discuss elsewhere), has been presented in entirely different terms—in the quasi-mathematical, holistic equation of exchange, derived especially from Irving Fisher. The prevalence of this fallacious approach makes a detailed critique worth while.

The classic exposition of the equation of exchange was in Irving Fisher's *Purchasing Power of Money*.[48] Fisher describes the chief purpose of his work as that of investigating "the causes determining the purchasing power of money." Money is a generally acceptable medium of exchange, and purchasing power is rightly defined as the "quantities of other goods which a given quantity of goods will buy." [49] He explains that the lower the prices of goods, the larger will be the quantities that can be bought by a given amount of money, and therefore the greater the purchasing power of money. *Vice versa* if the prices of goods rise. This is correct; but then comes this flagrant *non sequitur:* "In short, the purchasing power of money is the reciprocal of the level of prices; so that the study of the purchasing power of money is identical with the study of price levels." [50] From then on, Fisher proceeds to investigate the causes of the "price level"; thus, by a simple "in short," Fisher has leaped from the real world of an array of individual prices for an innumerable list of concrete goods into the misleading fiction of a "price level," without discussing the grave difficulties which any such concept must face. The fallacy of the "price level" concept will be treated further below.

The "price level" is allegedly determined by three aggregative factors: the quantity of money in circulation, its "velocity of circulation"—the average number of times during a period that a unit of money is exchanged for goods—and the total volume of goods bought for money. These are related by the famous equation of exchange: $MV = PT$. This equation of exchange is built up by Fisher in the following way: First, consider an individual exchange transaction—Smith buys ten pounds of sugar for seven cents a pound.[51] An exchange has been made, Smith giving up 70 cents to Jones, and Jones transferring ten pounds of sugar to Smith. From this fact Fisher somehow deduces that "10 pounds of sugar have been regarded as *equal* to 70 cents, and this fact may be expressed thus: 70 cents = 10 pounds multiplied by 7 cents a pound." [52] This off-hand assumption of equality is not self-evident, as Fisher apparently assumes, but a tangle of fallacy and irrelevance. *Who* has "regarded" the ten pounds of sugar as *equal* to the seventy cents? Certainly not Smith, the buyer of the sugar. He bought the sugar precisely because he considered the two quantities as *unequal* in value; to him the value of the sugar was greater than the value of the seventy cents, and that is why he made the exchange. On the other hand, Jones, the seller of the sugar, made the exchange precisely because the values of the two goods were *unequal in the opposite direction,* i.e., he valued the seventy cents more than he did the sugar. There is thus never any equality of values on the part of the two participants. The assumption that an exchange presumes some sort of equality has been a delusion of economic theory since Aristotle, and it is surprising that Fisher, an exponent of the subjective theory of value in many respects, fell into the ancient trap. There is certainly no equality of values between two goods exchanged or, as in this case, between the money and the good. Is there an equality in anything else, and can Fisher's doctrine be salvaged by finding such an equality? Obviously not; there is no equality in weight, length, or any other magnitude. But to Fisher, the equation represents an equality in value between the "money side" and the "goods side"; thus, Fisher states: "The total money paid is equal in value to the total value of the goods bought. The equation thus has a money side and a goods side. The money side is the total money paid . . . The goods side is made up of the products of the quantities of goods exchanged multiplied by respective prices." [53]

We have seen, however, that even for the individual exchange, and setting aside the holistic problem of "total exchanges," there is no such "equality" that tells us anything about the facts of economic life. There is no "value-of-money side" equaling a "value-of-goods side." The equal sign is illegitimate in Fisher's equation.

How, then, account for the general acceptance of the equal sign and the equation? The answer is that, mathematically, the equation is of course an obvious truism: 70 cents = 10 pounds of sugar × 7 cents per pound of sugar. In other words, 70 cents = 70 cents. But this truism conveys no knowledge of economic fact whatsoever.[54] Indeed, it is possible to discover an endless number of such equations, on which esoteric articles and books could be published. Thus:

$$\text{70 cents} = \text{100 grains of sand} \times \frac{\text{number of students in a class}}{\text{100 grains of sand}} + \text{70 cents} - \text{number of students in a class.}$$

Then, we could say that the "causal factors" determining the quantity of money are: the number of grains of sand, the number of students in the class, and the quantity of money. What we have in Fisher's equation, in short, is *two* money sides, each identical with the other. In fact, it is an *identity* and not an equation. To say that such an equation is not very enlightening is self-evident. All that this equation tells us about economic life is that the *total money received in a transaction is equal to the total money given up in a transaction*—surely an uninteresting truism.

Let us reconsider the elements of the equation on the basis of the determinants of price, since that is our center of interest. Fisher's equation of exchange for an individual transaction can be rearranged as follows:

$$\frac{7 \text{ cents}}{1 \text{ pound of sugar}} = \frac{70 \text{ cents}}{10 \text{ pounds of sugar}}$$

Fisher considers that this equation yields the significant information that the price is *determined* by the total money spent divided by the total supply of goods sold. Actually, of course, the equation, as an equation, tells us nothing about the determinants of price; thus, we could set up an equally truistic equation:

$$\frac{7 \text{ cents}}{1 \text{ pound of sugar}} = \frac{70 \text{ cents}}{100 \text{ bushels of wheat}} \times \frac{100 \text{ bushels of wheat}}{10 \text{ pounds of sugar}}$$

This equation is just as mathematically true as the other, and, on Fisher's own mathematical grounds, we could argue cogently that Fisher has "left the important wheat price out of the equation." We could easily add innumerable equations with an infinite number of complex factors that "determine" price.

The *only* knowledge we can have of the determinants of price is the knowledge deduced logically from the axioms of praxeology. Mathematics can at best only translate our previous knowledge into relatively *un*intelligible form; or, usually, it will mislead the reader, as in the present case. The price in the sugar transaction may be made to equal any number of truistic equations; but it is determined by the supply and demand of the participants, and these in turn are governed by the utility of the two goods on the value scales of the participants in exchange. *This* is the fruitful approach in economic theory, not the sterile mathematical one. If we consider the equation of exchange as revealing the determinants of price, we find that Fisher must be implying that the determinants are the "70 cents" and the "10 pounds of sugar." But it should be clear that *things* cannot determine prices. *Things,* whether pieces of money or pieces of sugar or pieces of anything else, can never act; they cannot set prices or supply and demand schedules. All this can be done only by *human action:* only individual actors can decide whether or not to buy; only their value scales determine prices. It is this profound mistake that lies at the root of the fallacies of the Fisher equation of exchange: human action is abstracted out of the picture, and *things* are assumed to be in control of economic life. Thus, either the equation of exchange is a trivial truism—in which case, it is no better than a million other such truistic equations, and has no place in science, which rests on simplicity and economy of methods—or else it is supposed to convey some important truths about economics and the determination of prices. In that case, it makes the profound error of substituting for correct logical analysis of causes based on human action, misleading assumptions based on action by things. At best, the Fisher equation is superfluous and trivial; at worst, it is wrong and misleading, although Fisher himself believed that it conveyed important causal truths.

Thus, Fisher's equation of exchange is pernicious even for the individual transaction. How much more so when he extends it to the "economy as a whole"! For Fisher, this too was a simple step. "The equation of exchange is simply the sum of the equations involved in all individual exchanges" [55] in a period of time. Let us now, for the sake of argument, assume that there is nothing wrong with Fisher's individual equations and consider his "summing up" to arrive at the total equation for the economy as a whole. Let us also abstract from the statistical difficulties involved in discovering the magnitudes for any given historical situation. Let us look at several individual transactions of the sort that Fisher tries to build into a total equation of exchange:

A exchanges 70 cents for 10 pounds of sugar
B exchanges 10 dollars for 1 hat
C exchanges 60 cents for 1 pound of butter
D exchanges 500 dollars for 1 television set.

What is the "equation of exchange" for this community of four? Obviously there is no problem in summing up the total amount of money spent: $511.30. But what about the other side of the equation? Of course, if we wish to be meaninglessly truistic, we could simply write $511.30 on the other side of the equation, without any laborious building up at all. But if we merely do this, there is no point to the whole procedure. Furthermore, as

Fisher wants to get at the determination of prices, or "the price level," he cannot rest content at this trivial stage. Yet he continues on the truistic level:

$$\$511.30 = \frac{7 \text{ cents}}{1 \text{ pound of sugar}} \times 10 \text{ pounds of sugar} + \frac{10 \text{ dollars}}{1 \text{ hat}} \times 1 \text{ hat} + \frac{60 \text{ cents}}{1 \text{ pound of butter}} \times 1 \text{ pound of butter} + \frac{500 \text{ dollars}}{1 \text{ TV set}} \times 1 \text{ TV set}$$

This is what Fisher does, and this is still the same trivial truism that "total money spent equals total money spent." This triviality is not redeemed by referring to $p \times Q$, $p' \times Q'$, etc., with each p referring to a price and each Q referring to the quantity of a good, so that: E = Total money spent $= pQ + p'Q' + p''Q'' +$ . . . etc. Writing the equation in this symbolic form does not add to its significance or usefulness.

Fisher, attempting to find the causes of the price level, has to proceed further. We have already seen that even for the individual transaction, the equation $p = (E/Q)$ (price equals total money spent divided by the quantity of goods sold) is only a trivial truism and is erroneous when one tries to use it to analyze the *determinants* of price. (This is the equation for the price of sugar in Fisherine symbolic form.) How much worse is Fisher's attempt to arrive at such an equation for the whole community and to use this to discover the *determinants* of a mythical "price level"! For simplicity's sake, let us take only the two transactions of A and B, for the sugar and the hat. Total money spent, E, clearly equals \$10.70, which, of course, equals total money received, $pQ + p'Q'$. But Fisher is looking for an equation to explain the price level; therefore he brings in the concept of an "average price level," P, and a total quantity of goods sold, T, such that E is supposed to equal PT. But the transition from the trivial truism $E = pQ + p'Q'$ . . . to the equation $E = PT$ cannot be made as blithely as Fisher believes. Indeed, if we are interested in the explanation of economic life, it cannot be made at all.

For example, for the two transactions (or for the four), *what* is T? How can 10 pounds of sugar be added to 1 hat or to 1 pound of butter, to arrive at T? Obviously, no such addition can be performed, and therefore Fisher's holistic T, the total physical quantity of all goods exchanged, is a meaningless concept and cannot be used in scientific analysis. If T is a meaningless concept, then P must be also, since the two presumably vary inversely if E remains constant. And what, indeed, of P? Here, we have a whole array of prices, 7 cents a pound, $10 a hat, etc. What is the price *level?* Clearly, there is no price level here; there are only individual prices of specific goods. But here, error is likely to persist. Cannot prices in some way be "averaged" to give us a working definition of a price level? This is Fisher's solution. Prices of the various goods are in some way averaged to arrive at P, then $P = (E/T)$, and all that remains is the difficult "satistical" task of arriving at T. However, the concept of an average for prices is a common fallacy. It is easy to demonstrate that *prices can never be averaged* for different commodities; we shall use a simple average for our example, but the same conclusion applies to any sort of "weighted average" such as is recommended by Fisher or by anyone else.

What is an average? Reflection will show that for several things to be averaged together, they must first be totaled. In order to be thus added together, the things must have some *unit in common,* and it must be this unit that is added. Only homogeneous units can be added together. Thus, if one object is 10 yards long, a second is 15 yards long, and a third 20 yards long, we may obtain an average length by adding together the number of yards and dividing by three, yielding an average length of 15 yards. Now, money prices are in terms of ratios of units: cents per pound of sugar, cents per hat, cents per pound of butter, etc. Suppose we take the first two prices:

$$\frac{7 \text{ cents}}{1 \text{ pound sugar}} \quad \text{and} \quad \frac{1000 \text{ cents}}{1 \text{ hat}}$$

Can these two prices be averaged in any way? Can we add 1,000 and 7 together, get 1,007 cents, and divide by something to get a price level? Obviously not. Simple algebra demonstrates that the only way to add the ratios in terms of cents (certainly there is no other common unit available) is as follows:

$$\frac{\text{(7 hats and 1000 pounds of sugar) cents}}{\text{(hats) (pounds of sugar)}}$$

Obviously, neither the numerator nor the denominator makes sense; the units are incommensurable.

Fisher's more complicated concept of a weighted average, with the prices weighted by the quantities of each good sold, solves the problem of units in the numerator but *not* in the denominator:

$$P = \frac{pQ + p'Q' + p''Q''}{Q + Q' + Q''}$$

The pQ's are all money, but the Q's are still different units. Thus, any concept of average price level involves adding or multiplying quantities of completely different units of goods, such as butter, hats, sugar, etc., and is therefore meaningless and illegitimate. Even pounds of sugar and pounds of butter cannot be added together, because they are two different goods and their valuation is completely different. And if one is tempted to use poundage as the common unit of quantity, what is the pound weight of a concert or a medical or legal service?[56]

It is evident that PT, in the total equation of exchange, is a completely fallacious concept. While the equation $e = pQ$ for an individual transaction is at least a trivial truism, although not very enlightening, the equation $E = PT$ for the whole society is a *false* one. Neither P nor T can be defined meaningfully, and this would be necessary for this equation to have any validity. We are left only with $E = pQ + p'Q'$, etc., which gives us only the useless truism, $E = E$.[57]

Since the P concept is completely fallacious, it is obvious that Fisher's use of the equation to reveal the determinants of prices is also fallacious. He states that if E doubles, and T remains the same, P—the price level—must double. On the holistic level, this is not even a truism; it is false, because neither P nor T can be meaningfully defined. All we can say is that when E doubles, E doubles. For the individual transaction, the equation is at least meaningful; if a man now spends \$1.40 on 10 pounds of sugar, it is obvious that the price has doubled from 7 cents to 14 cents a pound. Still, this is only a mathematical truism, telling us nothing of the real causal forces at work. But Fisher never attempted to use this individual equation to explain the determinants of individual prices; he recognized that the logical analysis of supply and demand is far superior here. He used only the *holistic* equation, which he felt explained the determinants of the price level and was uniquely adapted to such an explanation. Yet the holistic equation is false, and the price level remains pure myth, an indefinable concept.

Let us consider the other side of the equation, $E = MV$, the average quantity of money in circulation in the period, multiplied by the average velocity of circulation. V is an absurd concept. Even Fisher, in the case of the other magnitudes, recognized the necessity of building up the total from individual exchanges. He was not successful in building up T out of the individual Q's, P out of the individual p's, etc., but at least he *attempted* to do so. But in the case of V, *what is the velocity of an individual transaction?* Velocity is not an independently defined variable. Fisher, in fact, can derive V only as being equal in every instance and every period to E/M. If I spend in a certain hour \$10 for a hat, and I had an average cash balance (or M) for that hour of \$200, then, by definition, my V equals $\frac{1}{20}$. I had an average quantity of money in my cash balance of \$200, each dollar turned over on the average of one-twentieth of a time, and consequently I spent \$10 in this period. But it is absurd to dignify any quantity with a place in an equation *unless it can be defined independently of the other terms in the equation.* Fisher compounds the absurdity by setting up M and V as independent determinants of E, which permits him to go to his desired conclusion that if M doubles, and V and T remain constant, P—the price level—will also double. But since V is defined as equal to E/M, what we actually have is: $M \times (E/M) = PT$ or simply, $E = PT$, our original equation. Thus, Fisher's attempt to arrive at a quantity equation with the price level approximately proportionate to the quantity of money is proved vain by yet another route.

A group of Cambridge economists—Pigou, Robertson, etc.—has attempted to rehabilitate the Fisher equation by eliminating V and substituting the idea that the total supply of money equals the total demand for money. However, their equation is not a particular advance, since they keep the fallacious holistic concepts of P and T, and their k is merely the reciprocal of V, and suffers from the latter's deficiencies.

In fact, since V is not an independently defined variable, M must be eliminated from the equation as well as V, and the Fisherine (and the Cambridge) equation cannot be used to demonstrate the "quantity theory of money." And since M and V must disappear, there are an infinite number of other "equations of exchange" that we could, with equal invalidity, uphold as "determinants of the price level." Thus, the aggregate stock of sugar in the economy may be termed S, and the ratio of E to the total stock of sugar may be called "average sugar turnover," or U. This new "equation of exchange" would be: $SU = PT$, and the stock of sugar would suddenly become a major determinant of the price level. Or we could substitute A = number of salesmen in the country, and X = total expenditures per salesman, or "salesmen turnover," to arrive at a new set of "determinants" in a new equation. And so on.

This example should reveal the fallacy of equations in economic theory. The Fisherine equation has been popular for many years because it has been thought to convey useful economic knowledge. It *appears* to be demonstrating the plausible (on *other* grounds) quantity theory of money. Actually, it has only been misleading.

There are other valid criticisms that could be made of Fisher: his use of index numbers, which even at best could only measure a change in a variable, but never define its actual position; his use of an index of T defined in terms of P and of P defined in terms of T; his denial that money is a commodity; the use of mathematical equations in a field where there can be no constants and therefore no quantitative predictions. In particular, even if the equation of exchange were valid in all other respects, it could at best only describe statically the conditions of an average period. It could never describe the path from one static condition to another. Even Fisher admitted this by conceding that a change in M would always affect V, so that the influence of M on P could not be isolated. He contended that after this "transition" period, V would revert to a constant and the effect on P would be proportional. Yet there is no reasoning to support this assertion. At any rate, enough has been shown to warrant expunging the equation of exchange from the economic literature.

14. *The Fallacy of Measuring and Stabilizing the PPM*

A. MEASUREMENT

In olden times, before the development of economic science, people naively assumed that the value of money remained always unchanged. "Value" was assumed to be an objective quantity inhering in things and their relations, and money was the measure, the fixed yardstick, of the values of goods and their changes. The value of the monetary unit, its purchasing power with respect to other goods, was assumed to be fixed.[58] The analogy of a fixed standard of measurement, which had become familiar to the natural sciences (weight, length, etc.), was unthinkingly applied to human action.

Economists then discovered and made clear that money does not remain stable in value, that the PPM does not remain fixed. The PPM can and does vary, in response to changes in the supply of or the demand for money. These, in turn, can be resolved into the stock of goods and the total demand for money. Individual money prices, as we have seen in section 8 above, are determined by the stock of and demand for money as well as by the stock of and demand for each good. It is clear, then, that the money relation and the demand for and the stock of each individual good are intertwined in each particular price transaction. Thus, when Smith decides whether or not to purchase a hat for two gold ounces, he weighs the utility of the hat against the utility of the two ounces. Entering into every price, then, is the stock of the good, the stock of money, and the demand for money and the good (both ultimately based on individuals' utilities). The money relation is *contained in* particular price demands and supplies and cannot, in practice, be separated from them. If, then, there is a change in the supply of or demand for money, the change will *not* be neutral, but will affect different specific demands for goods and different prices in varying proportions. There is no way of separately measuring changes in the PPM and changes in the specific prices of goods.

The fact that the use of money as a medium of exchange enables us to calculate relative exchange ratios between the different goods exchanged against money has misled some economists into believing that separate measurement of changes in the PPM is possible. Thus, we could say that 1 hat is "worth," or can exchange for, 100 pounds of sugar, or that 1 TV set can exchange for 50 hats. It is a temptation, then, to forget that these exchange ratios are purely hypothetical and can be realized in practice only through monetary exchanges, and to consider them as constituting some barter-world of their own. In this mythical world, the exchange ratios between the various goods are somehow determined separately from the monetary transactions, and it then becomes more plausible to say that some sort of method can be found of isolating the value of money from these relative values and establishing the former as a constant yardstick. Actually, this barter-world is a pure figment; these relative ratios are only historical expressions of past transactions that can be effected only by and with money.

Let us now assume that the following is the array of prices in the PPM on day 1:

10 cents per pound of sugar.
10 dollars per hat.
500 dollars per TV set.
5 dollars per hour legal service of Mr. Jones, lawyer.

Now suppose the following array of prices of the same goods on day 2:

15 cents per pound of sugar.
20 dollars per hat.
300 dollars per TV set.
8 dollars per hour of Mr. Jones' legal service.

Now what can economics say has happened to the PPM over these two periods? All that we can legitimately say is that now 1 dollar can buy $\frac{1}{20}$ of a hat instead of $\frac{1}{10}$ of a hat, $\frac{1}{300}$ of a TV set instead of $\frac{1}{500}$ of a set, etc. Thus, we can describe (if we know the figures) what happened to each individual price in the market array. But how much of the price rise of the hat was due to a rise in the demand for hats and how much to a fall in the demand for money? There is no way of answering such a question. *We do not even know for certain whether the PPM has risen or declined.* All we do know is that the purchasing power of money has fallen in terms of sugar, hats, and legal services, and risen in terms of TV sets. Even if all the prices in the array had risen we would not know by *how much* the PPM had fallen, and we would not know how much of the change was due to an increase in the demand for money and how much to changes in stocks. If the supply of money changed during this interval, we would not know how much of the change was due to the increased supply and how much to the other determinants.

Changes are taking place all the time in each of these determinants. In the real world of human action, there is no one determinant that can be used as a fixed benchmark; the whole situation is changing in response to changes in stocks of resources and products and to the changes in the valuations of all the individuals on the market. In fact, one lesson above all should be kept in mind when considering the claims of the various groups of mathematical economists: *in human action there are no quantitative constants.*[59] As a necessary corollary, all praxeological-economic laws are qualitative, not quantitative.

The *index-number* method of measuring changes in the PPM attempts to conjure up some sort of totality of goods whose exchange ratios remain constant among themselves, so that a kind of general averaging will enable a separate measurement of changes in the PPM itself. We have seen, however, that such separation or measurement is impossible.

The only attempt to use index numbers that has any plausibility is the construction of fixed-quantity weights for a base period. Each price is weighted by the quantity of the good sold in the base period, these weighted quantities representing a typical "market basket" proportion of goods bought in that period. The difficulties in such a market-basket concept are insuperable, however. Aside from the considerations mentioned above, there is in the first place *no average buyer or housewife.* There are only individual buyers, and each buyer has bought a different proportion and type of goods. If one person purchases a TV set, and another goes to the movies, each activity is the result of differing value scales, and each has different effects on the various commodities. There is no "average person" who goes partly to the movies and buys part of a TV set. There is therefore no "average housewife" buying some given proportion of a totality of goods. Goods are not bought in their totality against money, but only by individuals in individual transactions, and therefore there can be no scientific method of combining them.

Secondly, even if there were meaning to the market-basket concept, the utilities of the goods in the basket, as well as the basket proportions themselves, are always changing, and this completely eliminates any possibility of a meaningful constant with which to measure price changes. The nonexistent typical housewife would have to have constant valuations as well, an impossibility in the real world of change.

All sorts of index numbers have been spawned in a vain attempt to surmount these difficulties: quantity weights have been chosen that vary for each year covered; arithmetical, geometrical, and harmonic averages have been taken at variable and fixed weights; "ideal" formulas have been explored—all with no realization of the futility of these endeavors. No such index number, no attempt to separate and measure prices and quantities, can be valid.[60]

B. STABILIZATION

The knowledge that the purchasing power of money could vary led some economists to try to improve on the free market by creating, in some way, a monetary unit which would remain stable and constant in its purchasing power. All these stabilization plans, of course, involve in one way or another an attack on the gold or other commodity standard, since the value of gold fluctuates as a result of the continual changes in the supply of and the demand for gold. The stabilizers want the government to keep an arbitrary index of prices constant by pumping money into the economy when the index falls and taking money out when it rises. The outstanding proponent of "stable money," Irving Fisher, revealed the reason for his urge toward stabilization in the following autobiographical passage: "I became increasingly aware of the imperative need of a stable yardstick of value. I had come into economics from mathematical physics, in which fixed units of measure contribute the essential starting point."[61] Apparently, Fisher did not realize that there could be fundamental differences in the nature of the sciences of physics and of purposeful human action.

It is difficult, indeed, to understand what the advantages of a stable value of money are supposed to be. One of the most frequently cited advantages, for example, is that debtors will no longer be harmed by unforeseen rises in the value of money, while creditors will no longer be harmed by unforeseen declines in its value. Yet if creditors and debtors want such a hedge against future changes, they have an easy way out on the free market. When they make their contracts, they can agree that repayment be made in a sum of money corrected by some agreed-upon index number of changes in the value of money. Such a voluntary *tabular standard* for business contracts has long been advocated by stabilizationists, who have been rather puzzled to find that a course which appears to them so beneficial is almost never adopted in business practice. Despite the multitude of index numbers and other schemes that have been proposed to businessmen by these economists, creditors and debtors have somehow failed to take advantage of them. Yet, while stabilization plans have made no headway among the groups that they would supposedly benefit the most, the stabilizationists have remained undaunted in their zeal to force their plans on the whole society by means of State coercion.

There seem to be two basic reasons for this failure of business to adopt a tabular standard: (*a*) As we have seen, there is no scientific, objective means of measuring changes in the value of money. Scientifically, one index number is just as arbitrary and bad as any other. Individual creditors and debtors have not been able to agree on any one index number, therefore, that they can abide by as a measure of change in purchasing power. Each, according to his own interests, would insist on including different commodities at different weights in his index number. Thus, a debtor who is a wheat farmer would want to weigh the price of wheat heavily in his index of the purchasing power of money; a creditor who goes often to night clubs would want to hedge against the price of night-club entertainment, etc. (*b*) A second reason is that businessmen apparently prefer to take their chances in a speculative world rather than agree on some sort of arbitrary hedging device. Stock exchange speculators and commodity speculators are continually attempting to forecast future prices, and, indeed, all entrepreneurs are engaged in anticipating the uncertain conditions of the market. Apparently, businessmen are willing to be entrepreneurs in anticipating future changes in purchasing power as well as any other changes.

The failure of business to adopt voluntarily any sort of tabular standard seems to demonstrate the complete lack of merit in compulsory stabilization schemes. Setting this argument aside, however, let us examine the contention of the stabilizers that somehow they can create certainty in the purchasing power of money, while at the same time leaving freedom and uncertainty in the prices of *particular goods*. This is sometimes expressed in the statement: "Individual prices should be left free to change; the price level should be fixed and constant." This contention rests on the myth that some sort of general purchasing power of money or some sort of price level exists on a plane apart from specific prices in specific transactions. As we have seen, this is purely fallacious. There is no "price level," and there is no way that the exchange-value of money is manifested except in specific purchases of goods, i.e., specific prices. There is no way of separating the two concepts; any array of prices establishes at one and the same time an exchange relation or objective exchange-value between one good and another and between money and a good, and there is no way of separating these elements quantitatively.

It is thus clear that the exchange-value of money cannot be quantitatively separated from the exchange-value of goods. Since the general exchange-value, or PPM, of money cannot be quantitatively defined and isolated in any historical situation, and its changes cannot be defined or measured, it is obvious that it cannot be kept stable. If we do not know what something is, we cannot very well act to keep it constant.[62]

We have seen that the ideal of a stabilized value of money is impossible to attain or even define. Even if it were attainable, however, what would be the result? Suppose, for example, that the purchasing power of money rises and that we disregard the problem of measuring the rise. Why, if this is the result of action on an unhampered market, should we consider it a *bad* result? If the total supply of money in the community has remained constant, falling prices will be caused by a general increase in the demand for money or by an increase in the supply of goods as a result of increased productivity. An increased demand for money stems from the free choice of individuals, say, in the expectation of a more troubled future or of future price declines. Stabilization would deprive people of the chance to increase their *real* cash holdings and the real value of the dollar by free, mutually agreed-upon actions. As in any other aspect of the free market, those entrepreneurs who successfully anticipate the increased demand will benefit, and those who err will lose in their speculations. But even the losses of the latter are purely the consequence of their own voluntarily assumed risks. Furthermore, falling prices resulting from increased productivity are beneficial to all and are precisely the means by which the fruits of industrial progress spread on the free market. Any interference with falling prices blocks the spread of the fruits of an advancing economy; and then real wages could increase only in particular industries, and not, as on the free market, over the economy as a whole.

Similarly, stabilization would deprive people of the chance to *decrease* their real cash holdings and the real value of the dollar, should their demand for money fall. People would be prevented from acting on their expectations of future price increases. Furthermore, if the supply of goods should decline, a stabilization policy would prevent the price rises necessary to clear the various markets.

The intertwining of general purchasing power and specific prices raises another consideration. For money could not be pumped into the system to combat a supposed increase in the value of money without distorting the previous exchange-values between the various goods. We have seen that money cannot be neutral with respect to goods and that, therefore, the whole price structure will change with any change in the supply of money. Hence, the stabilizationist program of fixing the value of money or price level without distorting relative prices is necessarily doomed to failure. It is an impossible program.

Thus, even were it possible to define and measure changes in the purchasing power of money, stabilization of this value would have effects that many advocates consider undesirable. But the magnitudes cannot even be defined, and stabilization would depend on some sort of arbitrary index number. Whichever commodities and weights are included in the index, pricing and production will be distorted.

At the heart of the stabilizationist ideal is a misunderstanding of the nature of money. Money is considered either a mere *numeraire* or a grandiose measure of values. Forgotten is the truth that money is desired and demanded as a useful commodity, even when this use is only as a medium of exchange. When a man holds money in his cash balance, he is deriving utility from it. Those who neglect this fact scoff at the gold standard as a primitive anachronism and fail to realize that "hoarding" performs a useful social function.

15. *Business Fluctuations*

In the real world, there will be continual changes in the pattern of economic activity, changes resulting from shifts in the tastes and demands of consumers, in resources available, technological knowledge, etc. That prices and outputs fluctuate, therefore, is to be expected, and absence of fluctuation would be unusual. *Particular* prices and outputs will change under the impact of shifts in demand and production conditions; the general level of production will change according to individual time preferences. Prices will all tend to move in the same direction, instead of shifting in different directions for different goods, whenever there is a change in the *money relation.* Only a change in the supply of or demand for money will transmit its impulses throughout the entire monetary economy and impel prices in a similar direction, albeit at varying rates of speed. General price fluctuations can be understood only by analyzing the money relation.

Yet simple fluctuations and changes do not suffice to explain that terrible phenomenon so marked in the last century and a half—the "business cycle." The business cycle has had certain definite features which reveal themselves time and again. First, there is a boom period, when prices and productive activity expand. There is a greater boom in the heavy capital-goods and higher-order industries—such as industrial raw materials, machine goods, and construction, and in the markets for titles to these goods, such as the stock market and real estate. Then, suddenly, without warning, there is a "crash." A financial panic with runs on banks ensues, prices fall very sharply, and there is a sudden piling up of unsold inventory, and particularly a revelation of great excess capacity in the higher-order capital-goods industries. A painful period of liquidation and bankruptcy follows, accompanied by heavy unemployment, until recovery to normal conditions gradually takes place.

This is the empirical pattern of the modern business cycle. Historical events can be explained by laws of praxeology, which isolate causal connections. Some of these events can be explained by laws that we have learned: a general price rise could result from an increase in the supply of money or from a fall in demand, unemployment from insistence on maintaining wage rates that have suddenly increased in real value, a reduction in unemployment from a fall in real wage rates, etc. But one thing cannot be explained by any economics of the free market. And this is the crucial phenomenon of the crisis: *Why is there a sudden revelation of business error?* Suddenly, all or nearly all businessmen find that their investments and estimates have been in error, that they cannot sell their products for the prices which they had anticipated. This is the central problem of the business cycle, and this is the problem which any adequate theory of the cycle must explain.

No businessman in the real world is equipped with perfect foresight; all make errors. But the free market process precisely rewards those businessmen who are equipped to make a minimum number of errors. Why should there suddenly be a cluster of errors? Furthermore, why should these errors particularly pervade the capital-goods industries?

Sometimes sharp changes, such as a sudden burst of hoarding or a sudden raising of time preferences and hence a decrease in saving may arrive unanticipated, with a resulting crisis of error. But since the eighteenth century there has been an almost regular pattern of consistent clusters of error which always follow a boom and expansion of money and prices. In the Middle Ages and down to the seventeenth and eighteenth centuries, business crises rarely followed upon booms in this manner. They took place suddenly, in the midst of normal activity, and as the result of some obvious and identifiable external event. Thus, Scott lists crises in sixteenth- and early seventeenth-century England as irregular and caused by some obvious event: famine, plague, seizures of goods in war, bad harvest, crises in the cloth trade as a result of royal manipulations, seizure of bullion by the King, etc.[63] But in the late seventeenth, eighteenth and nineteenth centuries, there developed the aforementioned pattern of the business cycle, and it became obvious that the crisis and ensuing depression could no longer be attributed to some single external event or single act of government.

Since no one event could account for the crisis and depression, observers began to theorize that there must be some deep-seated defect *within* the free market economy that causes these crises and cycles. The blame must rest with the "capitalist system" itself. Many ingenious theories have been put forward to explain the business cycle as an outgrowth of the free-market economy, but none of them has been able to explain the crucial point: the cluster of errors after a boom. In fact, such an explanation can never be found, since no such cluster could appear on the free market.

The nearest attempt at an explanation stressed general swings of "overoptimism" and "overpessimism" in the business community. But put in such fashion, the theory looks very much like a *deus ex machina.* Why should hardheaded businessmen, schooled in trying to maximize their profits, suddenly fall victim to such psychological swings? In fact, the crisis brings bankruptcies regardless of the emotional state of particular entrepreneurs. We shall see in chapter 12 that feelings of optimism *do* play a role, but they are *induced* by certain objective economic conditions. We must search for the objective reasons that cause businessmen to become "overoptimistic." And they cannot be found on the free market.[64] The positive explanation of the business cycle, therefore, will have to be postponed to the next chapter.

16. *Schumpeter's Theory of Business Cycles*

Joseph Schumpeter's business cycle theory is one of the very few that attempt to integrate an explanation of the business cycle with an analysis of the entire economic system. The theory was presented in essence in his *Theory of Economic Development,* published in 1912. This analysis formed the basis for the "first approximation" of his more elaborate doctrine, presented in the two-volume *Business Cycles,* published in 1939.[65] The latter volume, however, was a distinct retrogression from the former, for it attempted to explain the business cycle by postulating three superimposed cycles (each of which was explainable according to his "first approximation"). Each of these cycles is supposed to be roughly periodic in length. They are alleged by Schumpeter to be the three-year "Kitchin" cycle; the nine-year "Juglar"; and the very long (fifty-year) "Kondratieff." These cycles are conceived as independent entities, combining in various ways to yield the aggregate cyclical pattern.[66] Any such "multicyclic" approach must be set down as a mystical adoption of the fallacy of conceptual realism. There is no reality or meaning to the allegedly independent sets of "cycles." The market is one interdependent unit, and the more developed it is, the greater the interrelations among market elements. It is therefore impossible for several or numerous independent cycles to coexist as self-contained units. It is precisely the characteristic of a business cycle that it permeates *all* market activities.

Many theorists have assumed the existence of *periodic* cycles, where the length of each successive cycle is uniform, even down to the precise number of months. The quest for periodicity is a chimerical hankering after the laws of physics; in human action there are no quantitative constants. Praxeological laws can be only qualitative in nature. Therefore, there will be no periodicity in the length of business cycles.

It is best, then, to discard Schumpeter's multicyclical schema entirely and to consider his more interesting one-cycle "approximation" (as presented in his earlier book), which he attempts to derive from his general economic analysis. Schumpeter begins his study with the economy in a state of "circular flow" equilibrium, i.e., what amounts to a picture of an evenly rotating economy. This is proper, since it is only by hypothetically investigating the disturbances of an imaginary state of equilibrium that we can mentally isolate the causal factors of the business cycle. First, Schumpeter describes the ERE, where all anticipations are fulfilled, every individual and economic element is in equilibrium, profits and losses are zero—all based on given values and resources. Then, asks Schumpeter, what can impel changes in this setup? First, there are possible changes in consumer tastes and demands. This is cavalierly dismissed by Schumpeter as unimportant.[67]

There are possible changes in population and therefore in the labor supply; but these are gradual, and entrepreneurs can readily adapt to them. Third, there can be new saving and investment. Wisely, Schumpeter sees that changes in saving-investment rates imply no business cycle; new saving will cause continuous growth. Sudden changes in the rate of saving, when *unanticipated* by the market, can cause dislocations, of course, as may *any* sudden, unanticipated change. But there is nothing *cyclic* or mysterious about these effects. Instead of concluding from this survey, as he should have done, that there *can be no business cycle* on the free market, Schumpeter turned to a fourth element, which for him was the generator of all growth as well as of business cycles—*innovation* in productive techniques.

We have seen above that innovations cannot be considered the prime mover of the economy, since innovations can work their effects only *through* saving and investment and since there are always a great many investments that could improve techniques *within* the corpus of existing knowledge, but which are not made for lack of adequate savings. This consideration alone is enough to invalidate Schumpeter's business-cycle theory.

A further consideration is that Schumpeter's own theory relies specifically for the financing of innovations on newly expanded bank credit, on new money issued by the banks. Without delving into Schumpeter's theory of bank credit and its consequences, it is clear that Schumpeter assumes a hampered market, for we have seen that there could not be any monetary credit expansion on a free market. Schumpeter therefore cannot establish a business-cycle theory for a purely unhampered market.

Finally, Schumpeter's explanation of innovations as the trigger for the business cycle necessarily assumes that there is a recurrent *cluster* of innovations that takes place in each boom period. Why should there be such a cluster of innovations? Why are innovations not more or less continuous, as we would expect? Schumpeter cannot answer this question satisfactorily. The fact that a bold few begin innovating and that they are followed by imitators does not yield a cluster, for this process could be continuous, with new innovators arriving on the scene. Schumpeter offers two explanations for the slackening of innovatory activity toward the end of the boom (a slackening essential to his theory). On the one hand, the release of new products yielded by the new investments creates difficulties for old producers and leads to a period of uncertainty and need for "rest." In contrast, in equilibrium periods, the risk of failure and uncertainty is less than in other periods. But here Schumpeter mistakes the auxiliary construction of the ERE for the real world. There is *never* in existence any actual period of certainty; *all periods are uncertain,* and there is no reason why increased production should cause more uncertainty to develop or any vague needs for rest. Entrepreneurs are always seeking profit-making opportunities, and there is no reason for any periods of "waiting" or of "gathering the harvest" to develop suddenly in the economic system.

Schumpeter's second explanation is that innovations cluster in only one or a few industries and that these innovation opportunities are therefore limited. After a while they become exhausted, and the cluster of innovations ceases. This is obviously related to the Hansen stagnation thesis, in the sense that there are alleged to be a certain limited number of "investment opportunities"—here innovation opportunities—at any time, and that once these are exhausted there is temporarily no further room for investments or innovations. The whole concept of "opportunity" in this connection, however, is meaningless. There is no limit on "opportunity" as long as wants remain unfulfilled. The only other limit on investment or innovation is saved capital available to embark on the projects. But this has nothing to do with vaguely available opportunities which become "exhausted"; the existence of saved capital is a continuing factor. As for innovations, there is no reason why innovations cannot be continuous or take place in many industries, or why the innovatory pace has to slacken.

As Kuznets has shown, a cluster of innovation must assume a cluster of entrepreneurial ability as well, and this is clearly unwarranted. Clemence and Doody, Schumpeterian disciples, countered that entrepreneurial ability *is* exhausted in the act of founding a new firm.[68] But to view entrepreneurship as simply the founding of new firms is completely invalid. Entrepreneurship is not just the founding of new firms, it is not merely innovation; it is *adjustment:* adjustment to the uncertain, changing conditions of the future.[69] This adjustment takes place, perforce, all the time and is not exhausted in any single act of investment.

We must conclude that Schumpeter's praiseworthy attempt to derive a business cycle theory from general economic analysis is a failure. Schumpeter almost hit on the right explanation when he stated that the only other explanation that could be found for the business cycle would be a cluster of *errors* by entrepreneurs, and he saw no reason, no objective cause, why there should be such a cluster of errors. That is perfectly true—for the free, unhampered market!

17. *Further Fallacies of the Keynesian System*

In the text above, we saw that even if the Keynesian functions were correct and social expenditures fell below income above a certain point and *vice versa,* this would have no unfortunate consequences for the economy. The level of national money income, and consequently of hoarding, is an imaginary bogey. In this section, we shall pursue our analysis of the Keynesian system and demonstrate further grave fallacies within the system itself. In other words, we shall see that the consumption function and investment are not ultimate determinants of social income (whereas above we demonstrated that it makes no particular difference if they are or not).

A. INTEREST AND INVESTMENT

Investment, though the dynamic and volatile factor in the Keynesian system, is also the Keynesian stepchild. Keynesians have differed on the causal determinants of investment. Originally, Keynes determined it by the interest rate as compared with the marginal efficiency of capital, or prospect for net return. The interest rate is supposed to be determined by the money relation; we have seen that this idea is fallacious. Actually, the equilibrium net rate of return *is* the interest rate, the natural rate to which the bond rate conforms. Rather than changes in the interest rate *causing* changes in investment, as we have seen before, changes in time preference are reflected in changes in consumption-investment decisions. Changes in the interest rate and in investment are two sides of a coin, both determined by individual valuations and time preferences.

The error of calling the interest rate the cause of investment changes, and itself determined by the money relation, is also adopted by such "critics" of the Keynesian system as Pigou, who asserts that falling prices will release enough cash to lower the interest rate, stimulate investment, and thus finally restore full employment.

Modern Keynesians have tended to abandon the intricacies of the relation between interest and investment and simply declare themselves agnostic on the factors determining investment. They rest their case on an alleged determination of consumption.[70]

B. THE "CONSUMPTION FUNCTION"

If Keynesians are unsure about investment, they have, until very recently, been very emphatic about consumption. Investment is a volatile, uncertain expenditure. Aggregate consumption, on the other hand, is a passive, stable "function" of immediately previous social income. Total net expenditures determining and equaling total net income in a period (gross expenditures *between* stages of production are unfortunately removed from discussion) consist of investment and consumption. Furthermore, consumption always behaves so that below a certain income level consumption will be higher than income, and above that level consumption will be lower. Fig. 82 depicts the relations among consumption, investment, expenditure, and social income.

The relation between income and expenditure is the same as shown in Fig. 78. Now we see why the Keynesians assume the expenditure curve to have a smaller slope than income. *Consumption* is supposed to have the identical slope as expenditures; for investment is unrelated to income, as the determinants are unknown. Hence, investment is depicted as having no functional relation to income and is represented as a constant gap between the expenditure and consumption lines.

The stability of the passive consumption function, as contrasted with the volatility of active investment, is a keystone of the Keynesian system. This assumption is replete with so many grave errors that it is necessary to take them up one at a time.

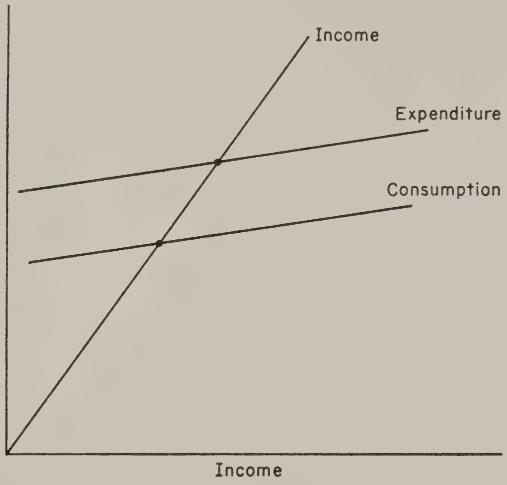


FIG. 82. RELATIONS AMONG CONSUMPTION, INVESTMENT, EXPENDITURE, AND SOCIAL INCOME, ACCORDING TO THE KEYNESIAN SYSTEM

a) How do the Keynesians justify the assumption of a stable consumption function with the shape as shown above? One route was through "budget studies"—cross-sectional studies of the relation between family income and expenditure by income groups in a given year. Budget studies such as that of the National Resources Committee in the mid-1930's yielded similar "consumption functions" with dishoardings increasing below a certain point, and hoardings above it (i.e., income below expenditures below a certain point, and expenditures below income above it).

This is supposed to intimate that those doing the "dissaving," i.e., the dishoarding, are poor people below the subsistence level who incur deficits by borrowing. But how long is this supposed to go on? How can there be a continuous deficit? Who would continue to lend these people the money? It is more reasonable to suppose that the dishoarders are *decumulating* their previously accumulated capital, i.e., that they are wealthy people whose businesses suffered losses during that year.

b) Aside from the fact that budget studies are misinterpreted, there are graver fallacies involved. For the curve given by the budget study has no relation whatever to the Keynesian consumption function! The former, at best, gives a cross section of the relation between *classes* of family expenditure and income for one year; the Keynesian consumption function attempts to establish a relation between *total* social income and total social consumption for *any* given year, holding true over a hypothetical range of social incomes. At best, one entire budget curve can be summed up to yield only *one point* on the Keynesian consumption function. Budget studies, therefore, can in no way confirm the Keynesian assumptions.

c) Another very popular device to confirm the consumption function reached the peak of its popularity during World War II. This was historical-statistical correlation of national income and consumption for a definite period of time, usually the 1930's. This correlation equation was then assumed to be the "stable" consumption function. Errors in this procedure were numerous. In the first place, even assuming such a stable relation, it would only be an *historical* conclusion, *not a theoretical law*. In physics, an experimentally determined law may be assumed to be constant for other identical situations; in human action, historical situations are never the same, and therefore there are no quantitative constants! Conditions and valuations could change at any time, and the "stable" relationship altered. There is here no proof of a stable consumption function. The dismal record of forecasts (such as those of postwar unemployment) made on this assumption should not have been surprising.

Moreover, a stable relation was not even established. Income was correlated with consumption and with investment. Since consumption is a much larger magnitude than (net) investment, no wonder that its *percentage* deviations around the regression equation were smaller! Furthermore, income is here being correlated with 80%–90% *of itself;* naturally, the "stability" is tremendous. If income were correlated with *saving,* of similar magnitude as investment, there would be no greater stability in the income-saving function than in the "income-investment function."

Thirdly, the consumption function is necessarily an *ex ante* relation; it is supposed to tell how much consumers *will* decide to spend given a certain total income. Historical statistics, on the other hand, record only *ex post* data, which give a completely different story. For any *given period of time,* for example, hoarding and dishoarding cannot be recorded *ex post.* In fact, *ex post,* on double-entry accounting records, total social income is always equal to total social expenditures. Yet, in the dynamic, *ex ante,* sense, it is precisely the *divergence* between total social income and total social expenditures (hoarding or dishoarding) that plays the crucial role in the Keynesian theory. But these divergences can never be revealed, as Keynesians believe, by study of *ex post* data. *Ex post,* in fact, saving always equals investment, and social expenditure always equals social income, so that the *ex post* expenditure line coincides with the income line.[71]

d) Actually, the whole idea of stable consumption functions has now been discredited, although many Keynesians do not fully realize this fact.[72] In fact, Keynesians themselves have admitted that, *in the long run,* the consumption function is not stable, since total consumption rises as income rises; and that *in the short run* it is not stable, since it is affected by all sorts of changing factors. But if it is not stable in the short run and not stable in the long run, what kind of stability does it have? Of what use is it? We have seen that the only really important runs are the immediate and the long-run, which shows the direction in which the immediate is tending. There is no use for some sort of separate "intermediate" situation.

e) It is instructive to turn now to the reasons that Keynes himself, in contrast to his followers, gave for assuming his stable consumption function. It is a confused exposition indeed.[73] The "propensity to consume" out of given income, according to Keynes, is determined by two sets of factors, "objective" and "subjective." It seems clear, however, that these are purely *subjective* decisions, so that there can be no separate objective *determinants.* In classifying subjective factors, Keynes makes the mistake of subsuming hoarding and investing motivations under categories of separate "causes": precaution, foresight, improvement, etc. Actually, as we have seen, the demand for money is ultimately determined by each individual for all sorts of reasons, but all tied up with uncertainty; motives for investment are to maintain and increase future standards of living. By a sleight of hand completely unsupported by facts or argument Keynes simply assumes all these subjective factors to be given in the short run, although he admits that they will change in the long run. (If they change in the long run, how can his system yield an equilibrium position?) He simply reduces the subjective motives to current economic organization, customs, standards of living, etc., and assumes them to be given.[74] The "objective factors" (which in reality are subjective, such as time-preference changes, expectations, etc.) can admittedly cause short-run changes in the consumption function (such as windfall changes in capital values). Expectations of future changes in income can affect an individual's consumption, but Keynes simply asserts without discussion that this factor "is likely to average out for the community as a whole." Time preferences are discussed in a very confused way, with interest rate and time preference assumed to be apart from and influencing the propensity to consume. Here again, short-run fluctuations are assumed to have little effect, and Keynes simply leaps to the conclusion that the propensity to consume is, in the short run, a "fairly" stable function.[75]

f) The failure of the consumption-function theory is not only the failure of a specific theory. It is a profound epistemological failure as well. For the concept of a consumption function has no place in economics at all. Economics is *praxeological,* i.e., its propositions are absolutely true given the existence of the axioms —the basic axiom being the existence of human action itself. Economics, therefore, is not and cannot be "empirical" in the positivist sense, i.e., it cannot establish some sort of empirical hypothesis which could or could not be true, and at best is only true approximately. Quantitative, empirico-historical "laws" are worthless in economics, since they may only be coincidences of complex facts, and not isolable, repeatable laws which will hold true in the future. The idea of the consumption function is not only wrong on many counts; it is irrelevant to economics.

Furthermore, the very term "function" is inappropriate in a study of human action. Function implies a quantitative, determined relationship, whereas no such quantitative determinism exists. People act and can change their actions at any time; no causal, constant, external determinants of action can exist. The term "function" is appropriate only to the unmotivated, repeatable motion of inorganic matter.

In conclusion, there is no reason whatever to assume that at some point, expenditures will be below income, while at lower points it will be above income. Economics does not and *cannot* know what *ex ante* expenditure will ever be in relation to income; at any point, it could be equal, or there could be net hoarding or dishoarding. The ultimate decisions are made by the individuals and are not determinable by science. There is, therefore, no stable expenditure function whatever.

C. THE MULTIPLIER

The once highly esteemed "multiplier" has now happily faded in popularity, as economists have begun to realize that it is simply the obverse of the stable consumption function. However, the complete absurdity of the multiplier has not yet been fully appreciated. The theory of the "investment multiplier" runs somewhat as follows:

$$\text{Social Income} = \text{Consumption} + \text{Investment}$$

Consumption is a stable function of income, as revealed by statistical correlation, etc. Let us say, for the sake of simplicity, that Consumption will always be .80 (Income).[76] In that case,

$$\begin{aligned}&\text{Income} = .80\ (\text{Income}) + \text{Investment}.\\&.20\ (\text{Income}) = \text{Investment; or}\\&\text{Income} = 5\ (\text{Investment}).\end{aligned}$$

The "5" is the "investment multiplier." It is then obvious that all we need to increase social money income by a desired amount is to increase investment by ⅕ of that amount; and the multiplier magic will do the rest. The early "pump primers" believed in approaching this goal through stimulating private investment; later Keynesians realized that if investment is an "active" volatile factor, government spending is no less active and more certain, so that government spending must be relied upon to provide the needed multiplier effect. Creating new money would be most effective, since the government would then be sure not to reduce private funds. Hence the basis for calling all government spending "investment": it is "investment" because it is not tied passively to income.

The following is offered as a far more potent "multiplier," on Keynesian grounds even more potent and effective than the investment multiplier, and *on Keynesian grounds there can be no objection to it.* It is a *reductio ad absurdum,* but it is not simply a parody, for it is in keeping with the Keynesian method.

Social Income = Income of (insert name of any person, say the reader) + Income of everyone else.

Let us use symbols:

Social Income = Y
Income of the Reader = R
Income of everyone else = V

We find that V is a completely stable function of Y. Plot the two on coordinates, and we find historical one-to-one correspondence between them. It is a tremendously stable function, far more stable than the "consumption function." On the other hand, plot R against Y. Here we find, instead of perfect correlation, only the remotest of connections between the fluctuating income of the reader of these lines and the social income. Therefore, this reader's income is the active, volatile, uncertain element in the social income, while everyone else's income is passive, stable, determined by the social income.

Let us say the equation arrived at is:

$$V = .99999\ Y$$

Then, $Y = .99999\ Y + R$

$$.00001\ Y = R$$
$$Y = 100{,}000\ R.$$

This is the reader's own personal multiplier, a far more powerful one than the investment multiplier. To increase social income and thereby cure depression and unemployment, it is only necessary for the government to print a certain number of dollars and give them to the reader of these lines. The reader's spending will prime the pump of a 100,000-fold increase in the national income.[77]

18. *The Fallacy of the Acceleration Principle*

The "acceleration principle" has been adopted by some Keynesians as their explanation of investment, then to be combined with the "multiplier" to yield various mathematical "models" of the business cycle. The acceleration principle antedates Keynesism, however, and may be considered on its own merits. It is almost always used to explain the behavior of investment in the business cycle.

The essence of the acceleration principle may be summed up in the following illustration:

Let us take a certain firm or industry, preferably first-rank producers of consumers' goods. Assume that the firm is producing an output of 100 units of a good during a certain period of time and that 10 machines of a certain type are needed in this production. If the period is a year, consumers demand and purchase 100 units of output per year. The firm has a stock of 10 machines. Suppose that the average life of a machine is 10 years. In equilibrium, the firm buys 1 machine as replacement every year (assuming it had bought a new machine every year to build up to 10).[78] Now suppose that there is a 20% increase in the consumer demand for the firm's output. Consumers now wish to purchase 120 units of output. Assuming a fixed ratio of capital investment to output, it is now necessary for the firm to have 12 machines (maintaining the ratio of 1 machine: 10 units of annual output). In order to have the 12 machines, it must buy 2 additional machines this year. Add this demand to its usual demand of 1 machine, and we see that there has been a 200% increase in demand for the machine. A 20% increase in demand for the product has caused a 200% increase in demand for the capital good. *Hence,* say the proponents of the acceleration principle, an increase in consumption demand *in general* causes an enormously magnified increase in demand for capital goods. Or rather, it causes a magnified increase in demand for "fixed" capital goods, of high *durability*. Obviously, capital goods lasting only one year would receive no magnification effect. The essence of the acceleration principle is the relationship between the increased demand and the low level of replacement demand for a durable good. The more durable the good, the greater the magnification and the greater, therefore, the acceleration effect.

Now suppose that, in the next year, consumer demand for output remains at 120 units. There has been no change in consumer demand from the second year (when it changed from 100 to 120) to the third year. And yet, the accelerationists point out, dire things are happening in the demand for fixed capital. For now there is no longer any need for firms to purchase any new machines beyond what is necessary for replacement. Needed for replacement is still only 1 machine per year. As a result, while there is zero change in demand for consumers' goods, there is a 200% *decline* in demand for fixed capital. And the former is the cause of the latter. In the long run, of course, the situation stabilizes into an equilibrium with 120 units of output and 1 unit of replacement. But in the short run there has been consequent upon a simple increase of 20% in consumer demand, first a 200% increase in the demand for fixed capital, and next a 200% decrease.

To the upholders of the acceleration principle, this illustration provides the key to some of the main features of the business cycle: the greater fluctuations of fixed capital-goods industries as compared with consumers' goods, and the mass of errors revealed by the crisis in the investment goods industries. The acceleration principle leaps boldly from the example of a single firm to a discussion of aggregate consumption and aggregate investment. Everyone knows, the advocates say, that consumption increases in a boom. This increase in consumption accelerates and magnifies increases in investment. Then, the rate of increase of consumption slows down, and a decline is brought about in investment in fixed capital. Furthermore, if consumption demand declines, then there is "excess capacity" in fixed capital—another feature of the depression.

The acceleration principle is rife with error. An important fallacy at the heart of the principle has been uncovered by Professor Hutt.[79] We have seen that consumer demand increases by 20%; but why must 2 extra machines be purchased *in a year?* What does the *year* have to do with it? If we analyze the matter closely, we find that the year is a purely arbitrary and irrelevant unit even within the terms of the example itself. We might just as readily take a *week* as the period of time. Then we would have to say that consumer demand (which, after all, goes on continuously) increases 20% over the first week, thereby necessitating a 200% increase in demand for machines in the first *week* (or even an *infinite* increase if the replacement does not precisely occur in the first week), followed by a 200% (or infinite) decline in the next week, and stability thereafter. A week is never used by the accelerationists because the example would then be glaringly inapplicable to real life, which does not see such enormous fluctuations in the course of a couple of weeks. *But a week is no more arbitrary than a year.* In fact, the only *non*arbitrary period to choose would be the life of the machine (e.g., ten years). Over a *ten*-year period, demand for machines had previously been 10 (in the previous decade), and in the current and succeeding decades it will be 10 plus the extra 2, i.e., 12. In short, over the ten-year period the demand for machines will increase *precisely in* *the same proportion* as the demand for consumers' goods—and there is no magnification effect whatever,

Since businesses buy and produce over planned periods covering the life of their equipment, there is no reason to assume that the market will not plan production suitably and smoothly, without the erratic fluctuations manufactured by the model of the acceleration principle. There is, in fact, no validity in saying that increased consumption *requires* increased production of machines immediately; on the contrary, it is only increased saving and investment in machines, at points of time chosen by entrepreneurs strictly on the basis of expected profit, that *permits* increased production of consumers' goods in the future.

Secondly, the acceleration principle makes a completely unjustified leap from the single firm or industry to the whole economy. A 20% increase in consumption demand at one point must signify a 20% drop in consumption somewhere else. For how can consumption demand in general increase? Consumption demand in general can increase only through a shift from saving. But if saving decreases, then there are less funds available for investment. If there are less *funds* available for investment, how can investment increase even *more* than consumption? In fact, there are *less* funds available for investment when consumption increases. Consumption and investment compete for the use of funds.

Another important consideration is that the proof of the acceleration principle is couched in *physical* rather than *monetary* terms. Actually, consumption demand, particularly *aggregate* consumption demand, as well as demand for capital goods, cannot be expressed in physical terms; it must be expressed in monetary terms, since the demand for goods is the reverse of the *supply* of money on the market for exchange. If consumer demand increases either for one good or for all, it increases in monetary terms, thereby raising prices of consumers' goods. Yet we notice that there has been no discussion whatever of prices or price relationships in the acceleration principle. This neglect of price relationships is sufficient by itself to invalidate the entire principle.[80] The acceleration principle simply glides from a demonstration in *physical* terms to a conclusion in *monetary* terms.

Furthermore, the acceleration principle assumes a constant relationship between "fixed" capital and output, ignoring substitutability, the possibility of a range of output, the more or less intensive working of factors. It also assumes that the new machines are produced practically instantaneously, thus ignoring the requisite period of production.

In fact, the entire acceleration principle is a fallaciously mechanistic one, assuming automatic reactions by entrepreneurs to *present* data, thereby ignoring the most important fact about entrepreneurship: that it is *speculative,* that its essence is estimating the data of the uncertain future. It therefore involves judgment of future conditions by businessmen, and not simply blind reactions to past data. Successful entrepreneurs are those who best forecast the future. Why can't the entrepreneurs foresee the supposed slackening of demand and arrange their investments accordingly? In fact, that is what they will do. If the economist, armed with knowledge of the acceleration principle, thinks that he will be able to operate more profitably than the generally successful entrepreneur, why does he not become an entrepreneur and reap the rewards of success himself? All theories of the business cycle attempting to demonstrate general entrepreneurial error on the free market founder on this problem. They do not answer the crucial question: Why does a whole set of men most able in judging the future suddenly lapse into forecasting error?

A clue to the correct business cycle theory is contained in the fact that buried somewhere in a footnote or minor clause of all business cycle theories is the assumption that the money supply expands during the boom, in particular through credit expansion by the banks. The fact that this is a necessary condition in all the theories should lead us to explore this factor further: perhaps it is a sufficient condition as well. But, as we have seen above, there can be no bank credit expansion on the free market, since this is equivalent to the issue of fraudulent warehouse receipts. The positive discussion of business cycle theory will have to be postponed to the next chapter, since there can be no business cycle in the purely free market.

Business cycle theorists have always claimed to be more "realistic" than general economic theorists. With the exceptions of Mises and Hayek (correctly) and Schumpeter (fallaciously), none has tried to deduce his business cycle theory from general economic analysis.[81] It should be clear that this is required for a satisfactory explanation of the business cycle. Some, in fact, have explicitly discarded economic analysis altogether in their study of business cycles, while most writers use aggregative "models" with no relation to a general economic analysis of individual action. All of these commit the fallacy of "conceptual realism" —i.e., of using aggregative concepts and shuffling them at will, without relating them to actual individual action, while believing that something is being said about the real world. The business-cycle theorist pores over sine curves, mathematical models and curves of all types; he shuffles equations and interactions and thinks that he is saying something about the economic system or about human action. In fact, he is not. The overwhelming bulk of current business cycle theory is not economics at all, but meaningless manipulation of mathematical equations and geometric diagrams.[82]

12

The Economics of Violent Intervention in the Market

1. *Introduction*

Up to this point we have been assuming that no violent invasion of person or property occurs in society; we have been tracing the economic analysis of the free society, the free market, where individuals deal with one another only peacefully and never with violence. This is the construct, or "model," of the purely free market. And this model, imperfectly considered perhaps, has been the main object of study of economic analysis throughout the history of the discipline.

In order to complete the economic picture of our world, however, economic analysis must be extended to the nature and consequences of violent actions and interrelations in society, including intervention in the market and violent abolition of the market ("socialism"). Economic analysis of intervention and socialism has developed much more recently than analysis of the free market.[1] In this book, space limitations prevent us from delving into the economics of intervention to the same extent as we have treated the economics of the free market. But our researches into the former field are summarized more briefly in this final chapter.

One reason why economics has tended to concentrate on the free market is that here is presented the problem of order arising out of a seemingly "anarchic" and "planless" set of actions. We have seen that instead of the "anarchy of production" that a person untrained in economics might see in the free market, there emerges an orderly pattern, structured to meet the desires of all individuals, and yet eminently suited to adapt to changing conditions. In this way we have seen how the free, voluntary actions of individuals combine in an orderly determination of such seemingly mysterious processes as the formation of prices, income, money, economic calculation, profits and losses, and production.

The fact that each man, in pursuing his own self-interest, furthers the interest of everyone else, is a *conclusion* of economic analysis, not an *assumption* on which the analysis is grounded. Many critics have accused economists of being "biased" in favor of the free market economy. But this or any other conclusion of economics is not a bias or prejudice, but a *post-judice* (to use a happy term of Professor E. Merrill Root's)—a judgment made *after* inquiry, and not beforehand.[2] Personal preferences, moreover, are completely separate from the validity of analytic procedures. The personal preferences of the analyst are of no interest for economic science; what is relevant is the validity of the method itself.

2. *A Typology of Intervention*

Intervention is the intrusion of aggressive physical force into society; it means the substitution of coercion for voluntary actions. It must be remembered that, *praxeologically,* it makes no difference what individual or group wields this force; the economic nature and consequences of the action remain the same.

Empirically, the vast bulk of interventions are performed by States, since the State is the only organization in society legally equipped to use violence and since it is the only agency that legally derives its revenue from a compulsory levy. It will therefore be convenient to confine our treatment to *government* intervention—bearing in mind, however, that private individuals may illegally use force, or that government may, openly or covertly, permit favored private groups to employ violence against the persons or property of others.

What types of intervention can an individual or group commit? Little or nothing has so far been done to construct a systematic typology of intervention, and economists have simply discussed such seemingly disparate actions as price control, licensing, inflation, etc. We can, however, classify interventions into three broad categories. In the first place, the *intervener,* or "invader," or "aggressor"—the individual or group that initiates violent intervention—may command an individual subject to do or not do certain things, when these actions directly involve the individual's person or property *alone.* In short, the intervener may restrict the subject's use of his property, where exchange with someone else is not involved. This may be called an *autistic intervention,* where the specific order or command involves only the subject himself. Secondly, the intervener may compel an *exchange* between the individual subject and himself or coerce a "gift" from the subject. We may call this a *binary intervention,* since a hegemonic relation is here established between two people: the intervener and the subject. Thirdly, the invader may either compel or prohibit an exchange between a *pair* of subjects (exchanges always take place between *two* people). In this case, we have a *triangular intervention,* where a hegemonic relation is created between the invader and a *pair* of actual or potential exchangers. All these interventions are examples of the *hegemonic* relation (see chapter 2 above)—the relation of command and obedience —in contrast to the contractual, free-market relation of voluntary mutual benefit.

Autistic intervention occurs, therefore, when the intervener coerces a subject without receiving any good or service in return. Simple homicide is an example; another would be the compulsory enforcement or prohibition of a salute, speech, or religious observance. Even if the intervener is the State, issuing an edict to all members of society, the edict in itself is still *autistic,* since the lines of force radiate, so to speak, from the State to each individual alone. Binary intervention, where the intervener forces the subject to make an exchange or gift to the former, is exemplified in taxation, conscription, and compulsory jury service. Slavery is another example of binary, coerced exchange between master and slave.

Examples of triangular intervention, where the intervener compels or prohibits exchanges between sets of two *other* individuals, are price control and licensing. Under price control, the State prohibits any pair of individuals from making an exchange below or above a certain fixed rate; licensing prohibits certain people from making specified exchanges with others. Curiously enough, writers on political economy have recognized only cases in the third category as being "intervention." It is understandable that economists have overlooked autistic intervention, for, in truth, economics can say little about events that lie outside the monetary exchange nexus. There is far less excuse for the neglect of binary intervention.

3. *Direct Effects of Intervention on Utility*

In tracing the effects of intervention, we must explore both the direct and the indirect consequences. In the first place, intervention will have direct, immediate consequences on the utilities of those participating. On the one hand, when the society is free and there is no intervention, everyone will always act in the way that he believes will maximize his utility, i.e., will raise him to the highest possible position on his value scale. In short, everyone's utility *ex ante* will be "maximized" (provided we take care not to interpret "utility" in a cardinal manner). Any exchange on the free market, indeed any action in the free society, occurs because it is expected to benefit each party concerned. If we may use the term "society" to depict the pattern, the array, of all individual exchanges, then we may say that the free market maximizes social utility, since everyone gains in utility from his free actions.[3]

Coercive intervention, on the other hand, signifies *per se* that the individual or individuals coerced *would not have voluntarily done what they are now being forced to do by the intervener*. The person who is coerced into saying or not saying something or into making or not making an exchange with the intervener or with a third party is having his actions changed by a threat of violence. The man being coerced, therefore, *always loses in utility as a result of the intervention,* for his action has been forcibly changed by its impact. In autistic and binary interventions, the individual subjects each lose in utility; in triangular interventions, at least one, and sometimes both, of the pair of would-be exchangers lose in utility.

Who *gains* in utility *ex ante?* Clearly, the intervener; otherwise, he would not have made the intervention. In the case of binary intervention, he himself gains directly in exchangeable goods or services at the expense of his subject.[4] In the case of autistic and triangular interventions, he gains in a sense of psychic well-being from enforcing regulations upon others (or, perhaps, in providing a seeming jusitfication for other, binary interventions).

In contrast to the free market, therefore, all cases of intervention supply one set of men with gains *at the expense* of another set. In binary interventions, the direct gains and losses are "tangible" in the form of exchangeable goods or services; in other cases, the direct gains are nonexchangeable satisfactions to the interveners, and the direct loss is being coerced into less satisfying, if not positively painful, forms of activity.

Before the development of economic science, people tended to think of exchange and the market as always benefiting one party at the expense of the other. This was the root of the mercantilist view of the market, of what Ludwig von Mises calls the "Montaigne fallacy." Economics has shown this to be a fallacy, for on the market *both* parties to an exchange will benefit.[5] On the market, therefore, *there can be no such thing as exploitation.* But the thesis of an inherent conflict of interest *is* true whenever the State or anyone else wielding force intervenes on the market. For then the intervener gains at the expense of the subjects who lose in utility. On the market all is harmony. But as soon as intervention appears on the scene, conflict is created, for each person or group may participate in a scramble to be a net gainer rather than a net loser—to be part of the intervening team, as it were, rather than one of the victims. And the very institution of taxation insures that some will be in the net gaining, and others in the net losing, class.[6] Since all State actions rest on the fundamental binary intervention of taxation, it follows that no State action can increase social utility, i.e., can increase the utility of all affected individuals.[7]

A common objection to the conclusion that the free market, in unique contrast to intervention, increases the utility of every individual in society, points to the fate of the entrepreneur whose product suddenly becomes obsolete. Take, for example, the buggy manufacturer who faces a shift in public demand from buggies to automobiles. Does *he* not lose utility from the operation of the free market? We must realize, however, that we are concerned only with the utilities that are *demonstrated* by the manufacturer's action.[8] In both period 1, when consumers demanded buggies, and in period 2, when they shifted to autos, he acts so as to maximize his utility on the free market. The fact that, in retrospect, he prefers the results of period 1 may be interesting data for the historian, but is irrelevant for the economic theorist. For the manufacturer is *not* living in period 1 any more. He lives always under *present* conditions and in relation to the present value scales of his fellow men. Voluntary exchanges, in any given period, will increase the utility of everyone and will therefore maximize social utility. The buggy manufacturer could not restore the conditions or results of period 1 unless he used force against others to coerce their exchanges, but, in that case, social utility could no longer be maximized, because of his invasive act.

Just as some writers have tried to deny the voluntary nature and the mutual benefits of free exchange, so others have tried to attribute a voluntary quality to actions of the State. Generally, this attempt has been based either on the view that there exists an entity "society," which cheerfully endorses and supports the actions of the State, or that the majority endorses these acts and that this somehow *means* universal support, or finally, that somehow, down deep, even the opposing minority endorses the acts of the State. From these fallacious assumptions, they conclude that the State can increase social utility at least as well as the market can.[9, 10]

Having described the unanimity and harmony of the free market, as well as the conflict and losses of utility generated by intervention, let us ask what happens if government is used to check interventions in the market by private criminals—i.e., private imposers of coerced exchanges. It has been asked: Is not this "police" function an act of intervention, and does not the free market itself then necessarily rest on a "framework" of such intervention? And does not the existence of the free market therefore require a loss of utility on the part of the criminals who are being punished by the government? [11] In the first place, we must remember that the purely free market is an array of voluntary exchanges between sets of two persons. If there are no threats of criminal intervention in that market—say because everyone feels duty-bound to respect the private property of others—no "framework" of counterintervention will be needed. The"police" function is therefore solely a secondary derivative problem, not a precondition, of the free market.

Secondly, if governments—or private agencies, for that matter—are employed to check and combat intervention in society by criminals, it is certainly obvious that this combat imposes losses of utility upon the criminals. But these acts of defense are hardly "intervention" in our sense of the term. For the losses of utility are being imposed only upon people who, in turn, have been trying to impose losses of utility on peaceful citizens. In short, the force used by police agencies in defending individual freedom—i.e., in defending the persons and property of the citizens—is purely an *inhibitory* force; it is *counter*intervention against true, initiatory intervention. While such counter action cannot maximize "social utility"—the utility of *everyone* in society involved in interpersonal actions—it *does* maximize the utility of *noncriminals,* i.e., those who have been peacefully maximizing their own utility without inflicting losses upon others. Should these defense agencies do their job perfectly and eliminate all interventions, then their existence will be perfectly compatible with the maximization of social utility.

4. *Utility* Ex Post: *Free Market and Government*

We have thus seen that individuals maximize their utility *ex ante* on the free market, and that they cannot do so when there is intervention, for then the intervener gains in utility only at the expense of a demonstrated loss in utility by his subject. But what of utilities *ex post?* People may *expect* to benefit when they make decisions, but do they *actually* benefit from their results? How do the free market and intervention compare in traveling that vital path from *ante* to *post?*

For the free market, the answer is that the market is constructed so as to reduce error to a minimum. There is, in the first place, a fast-working, highly accurate, easily understandable test that tells the entrepreneur, and also the income-receiver, whether they are succeeding or failing at the task of satisfying the desires of the consumer. For the entrepreneur, who carries the main burden of adjustment to uncertain, fluctuating consumer desires, the test is particularly swift and sure—profits or losses. Large profits are a signal that he has been on the right track, losses that he has been on a wrong one. Profits and losses spur rapid adjustments to consumer demands; at the same time, they perform the function of getting money out of the hands of the inefficient entrepreneurs and into the hands of the good ones. The fact that good entrepreneurs prosper and add to their capital, and poor ones are driven out, insures an ever smoother market adjustment to changes in conditions. Similarly, to a lesser extent, land and labor factors move in accordance with the desire of their owners for higher incomes, and highly value-productive factors are rewarded accordingly.

Consumers also take entrepreneurial risks on the market. Many critics of the market, while willing to concede the *expertise* of the capitalist-entrepreneurs, bewail the prevailing ignorance of consumers, which prevents them from gaining the utility *ex post* that they had expected *ex ante*. Typically, Wesley C. Mitchell entitled one of his famous essays: "The Backward Art of Spending Money." Professor Mises has keenly pointed out the paradox of interventionists who insist that consumers are too ignorant or incompetent to buy products intelligently, while at the same time proclaiming the virtues of democracy, where the same people vote for or against politicians whom they do not know and on policies which they scarcely understand. To put it another way, the partisans of intervention assume that individuals are not competent to run their own affairs or to hire experts to advise them, but also assume that these same individuals *are* competent to vote for these experts at the ballot box. They are further assuming that the mass of supposedly incompetent consumers *are* competent to choose not only those who will rule over themselves, but also over the *competent* individuals in society. Yet such absurd and contradictory assumptions lie at the root of every program for "democratic" intervention in the affairs of the people.[12]

In fact, the truth is precisely the reverse of this popular ideology. Consumers are surely not omnisicient, but they have direct tests by which to acquire and check their knowledge. They buy a certain brand of breakfast food and they do not like it; and so they do not buy it again. They buy a certain type of automobile and like its performance; they buy another one. And in both cases, they tell their friends of this newly won knowledge. Other consumers patronize consumers' research organizations, which can warn or advise them in advance. But, in all cases, the consumers have the direct test of results to guide them. And the firm which satisfied the consumers expands and prospers and thus gains "good will," while the firm failing to satisfy them goes out of business.[13]

On the other hand, voting for politicians and public policies is a completely different matter. Here there are no direct tests of success or failure whatever, neither profits and losses nor enjoyable or unsatisfying consumption. In order to grasp consequences, especially the indirect catallactic consequences of governmental decisions, it is necessary to comprehend complex chains of praxeological reasoning. Very few voters have the ability or the interest to follow such reasoning, particularly, as Schumpeter points out, in political situations. For the minute influence that any one person has on the results, as well as the seeming remoteness of the actions, keeps people from gaining interest in political problems or arguments.[14] Lacking the direct test of success or failure, the voter tends to turn, not to those politicians whose policies have the best chance of success, but to those who can best "sell" their propaganda ability. Without grasping logical chains of deduction, the average voter will never be able to discover the errors that his ruler makes. To borrow an example from a later section of this chapter, suppose that the government inflates the money supply, thereby causing an inevitable rise in prices. The government can blame the price rise on wicked speculators or alien black marketeers, and unless the public knows economics, it will not be able to see the fallacies in the rulers' arguments.

It is curious, once more, that the very writers who complain most of the wiles and lures of advertising never apply their critique to the one area where it is truly correct: the advertising of politicians. As Schumpeter states:

> The picture of the prettiest girl that ever lived will in the long run prove powerless to maintain the sales of a bad cigarette. There is no equally effective safeguard in the case of political decisions. Many decisions of fateful importance are of a nature that makes it impossible for the public to experiment with them at its leisure and at moderate cost. Even if that is possible, judgment is as a rule not so easy to arrive at as in the case of the cigarette, because effects are less easy to interpret.[15]

George J. Schuller, in attempting to refute this argument, protested that: "complex chains of reasoning are required for consumers to select intelligently an automobile or television set." [16] But such knowledge is *not* necessary; for the whole point is that the consumers have always at hand a simple and pragmatic test of success: does the product work and work well? In public economic affairs, there is no such test, for no one can know whether a particular policy has "worked" or not without knowing the a priori reasoning of economics.

It may be objected that, while the average voter may not be competent to decide on *issues* that require chains of praxeological reasoning, he *is* competent to pick the *experts*—the politicians—

who will decide on the issues, just as the individual may select his own private expert adviser in any one of numerous fields. But the critical problem is precisely that in government the individual has no direct, personal test of success or failure of his hired expert such as he has in the market. On the market, individuals tend to patronize those experts whose advice is most successful. Good doctors or lawyers reap rewards on the free market, while poor ones fail; the privately hired expert flourishes in proportion to his ability. In government, on the other hand, there is no market test of the expert's success. Since there is no direct test in government, and, indeed, little or no personal contact or relationship between politician or expert and voter, there is no way by which the voter can gauge the true *expertise* of the man he is voting for. As a matter of fact, the voter is in even greater difficulties in the modern type of issueless election between candidates who agree on all fundamental questions than he is in voting on issues. For issues, after all, *are* susceptible to reasoning; the voter *can,* if he wants to and has the ability, learn about and decide on the issues. But what can any voter, even the most intelligent, know about the true *expertise* or competence of individual candidates, especially when elections are shorn of all important issues? The only thing that the voter can fall back on for a decision are the purely external, advertised "personalities" of the candidates, their glamorous smiles, etc. The result is that voting purely on candidates is bound to be even less rational than voting on the issues themselves.

Not only does government lack a successful test for picking the proper experts, not only is the voter necessarily more ignorant than the consumer, but government itself has other inherent mechanisms which lead to poorer choices of experts and officials. For one thing, the politician and the government expert receive their revenues, not from service voluntarily purchased on the market, but from a compulsory levy on the inhabitants. These officials, then, wholly lack the direct pecuniary incentive to *care* about servicing the public properly and competently. Furthermore, the relative rise of the "fittest" applies in government as in the market, but the criterion of "fitness" is here very different.

In the market, the fittest are those most able to serve the consumers. In government, the fittest are either (1) those most able at wielding coercion or (2) if bureaucratic officials, those best fitted to curry favor with the leading politicians or (3) if politicians, those most adroit at appeals to the voting public.[17]

Another critical divergence between market action and democratic voting is this: the voter has, for example, only a 1/100 billionth power to choose among his potential rulers, who in turn will make decisions affecting him, unchecked until the next election. The individual acting on the market, on the other hand, has absolute sovereign power to make decisions over his property, not just a removed, 1/100 billionth power. Furthermore, the individual is continually demonstrating his choices of whether to buy or not to buy, to sell or not to sell, by making absolute decisions in regard to his property. The voter, by voting for some particular candidate, demonstrates only a relative preference for him over one or two other potential rulers—and he must do this, let us not forget, within the framework of the coercive rule that, whether he votes or not, *one* of these men will rule over him for the next few years. (We should also not forget that, with a secret ballot, the voter does not even demonstrate this much of a constrained and limited preference.)

It may be objected that the shareholder voting in a corporation is in similar straits. But he is not. Aside from the critical point that the corporation does not acquire *its* funds by compulsory levy, the shareholder still has absolute power over his own property by being able to sell his shares on the free market, something that the democratic voter clearly cannot do. Moreover, the shareholder has voting power in the corporation proportionate to his degree of property ownership of the common assets.[18]

Thus, we see that the free market has a smooth, efficient mechanism to bring anticipated, *ex ante* utility into the realization and fruition of *ex post*. The free market always maximizes *ex ante* social utility; it always tends to maximize *ex post* social utility as well. The field of political action, on the other hand, i.e., the field where most intervention takes place, has no such mechanism; indeed, the political process inherently tends to delay and thwart the realization of expected gains. So that the divergence in *ex post* results between free market and intervention is even greater than in *ex ante,* anticipated utility. In fact, the divergence is still greater than we have shown. For, as we analyze the *indirect* consequences of intervention in the remainder of this chapter, we shall find that, in every instance, the consequences of intervention will make the intervention look worse in the eyes of many of its original supporters. Thus, we shall find that the indirect consequence of a price control is to cause unexpected shortages of the product. *Ex post,* many of the interveners themselves will feel that they have lost rather than gained in utility.

In sum, the free market always benefits every participant, and it maximizes social utility *ex ante;* it also tends to do so *ex post,* for it contains an efficient mechanism for speedily converting anticipations into realizations. With intervention, one group gains directly at the expense of another, and therefore social utility is not maximized or even increased; there is no mechanism for speedy translation of anticipation into fruition, but indeed the opposite; and finally, as we shall see, the indirect consequences of intervention will cause many interveners themselves to *lose* utility *ex post.* The remainder of this chapter traces the nature and *indirect* consequences of various forms of intervention.

5. *Triangular Intervention: Price Control*

A triangular intervention occurs when an intervener either compels a pair of people to make an exchange or prohibits them from making an exchange. The coercion may be imposed on the *terms* of the exchange or on the nature of one or both of the products being exchanged or on the people doing the exchanging. The former type of triangular intervention is called a *price control,* because it deals specifically with the terms, i.e., the price, at which the exchange is made; the latter may be called *product control,* as dealing specifically with the nature of the product or of the producer. An example of price control is a decree by the government that no one may buy or sell a certain product at more (or, alternatively, less) than X gold ounces per pound; an example of product control is the prohibition of the sale of this product or prohibition of the sale by any but certain persons selected by the government. Clearly both forms of control have various repercussions on both the price and the nature of the product.

A price control may be effective or ineffective. It will be ineffective if the regulation has no influence on the market price. Thus, if automobiles are selling at 100 gold ounces on the market, and the government decrees that no autos be sold for more than 300 ounces, on pain of punishment inflicted on violators, the decree is at present completely academic and ineffective.[19] However, should a customer wish to order an unusual custom-built automobile for which the seller would charge over 300 ounces, then the regulation *now* becomes effective and changes transactions from what they would have been on the free market.

There are two types of effective price control: a *maximum* price control that prohibits all exchanges of a good above a certain price, with the controlled price being *below* the market equilibrium price; and a *minimum* price control prohibiting exchanges below a certain price, this fixed price being *above* market equilibrium. Let Fig. 83 depict the supply and demand curves

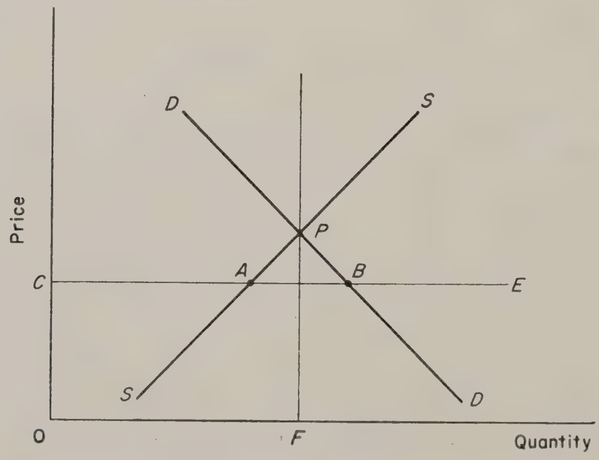


Fig. 83. Effect of a Maximum Price Control

for a good subjected to maximum price control: *DD* and *SS* are the demand and supply curves for the good. *FP* is the equilibrium price set by the market. The government, let us assume, imposes a maximum control price *OC*, above which any sale is illegal. At the control price, the market is no longer cleared, and the quantity demanded exceeds the quantity supplied by amount *AB*. In this way, an artificially created shortage of the good has been created. In any shortage, consumers rush to buy goods which are not available at the price. Some must do without, others must patronize the market, revived as illegal or "black," paying a premium for the risk of punishment that sellers now undergo. The chief characteristic of a price maximum is the queue, the endless "lining up" for goods that are not sufficient to supply the people at the rear of the line. All sorts of subterfuges are invented by people desperately seeking to arrive at the clearance of supply and demand once provided by the market. "Under-the-table" deals, bribes, favoritism for older customers, etc., are inevitable features of a market shackled by the price maximum.[20]

It must be noted that, even if the stock of a good is frozen for the foreseeable future and the supply line is vertical, this artificial shortage will still develop and all these consequences ensue. The more "elastic" the supply, i.e., the more resources shift out of production, the more aggravated, *ceteris paribus,* the shortage will be. The firms that leave production are the ones nearest the margin. If the price control is "selective," i.e., is imposed on one or a few products, the economy will not be as universally dislocated as under general maxima, but the artificial shortage created in the particular line will be even more pronounced, since entrepreneurs and factors can shift to the production and sale of other products (preferably substitutes). The prices of the substitutes will go up as the "excess" demand is channeled off in their direction. In the light of this fact, the typical governmental reason for selective price control—"We must impose controls on this necessary product so long as it continues in short supply"—is revealed to be an almost ludicrous error. For the truth is the reverse: price control creates an artificial shortage of the product, which continues *as long as* the control is in existence—

in fact, becomes ever worse as resources have time to shift to other products. If the government were really worried about the short supply of certain products, it would go out of its way *not* to impose maximum price controls upon them.

Before investigating further the effects of general price maxima, let us analyze the consequences of a *minimum* price control, i.e., the imposition of a price *above* the free market price. This may be depicted in Fig. 84. *DD* and *SS* are the demand and supply curves respectively. *OC* is the control price and *FP* the market equilibrium price. At *OC,* the quantity demanded is less than the quantity supplied, by the amount *AB.* Thus, while the effect of a maximum price is to create an artificial shortage, a minimum price creates an artificial unsold surplus, *AB.* The unsold surplus exists even if the *SS* line is vertical, but a more elastic supply will, *ceteris paribus,* aggravate the surplus. Once again, the market is not cleared. The artificially high price at first attracts resources into the field, while, at the same time, discouraging buyer demand. Under selective price control, resources will leave other fields where they benefit themselves and consumers better, and transfer to this field, where they overproduce and suffer losses as a result.

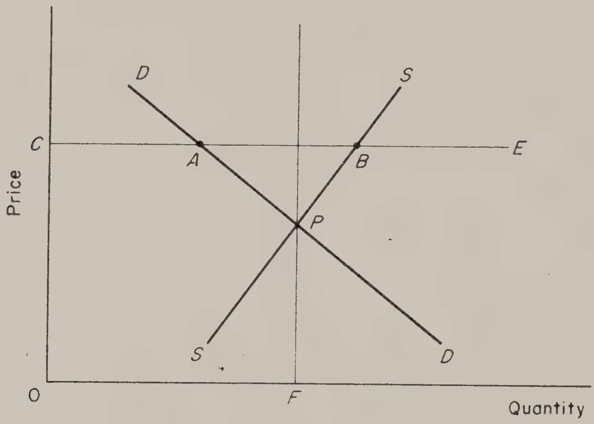


Fig. 84. Effect of a Minimum Price Control

This offers an interesting example of intervention tampering with the market and causing entrepreneurial losses. Entrepreneurs operate on the basis of certain criteria: prices, interest rate, etc., established by the free market. Interventionary tampering with these signals destroys the continual market tendency to adjustment and brings about losses and misallocation of resources in satisfying consumer wants.

General, over-all price maxima dislocate the entire economy and deny consumers the enjoyment of substitutes. General price maxima are usually imposed for the announced purpose of "preventing inflation"—invariably while the government is inflating the money supply by a large amount. Over-all price maxima are equivalent to imposing a *minimum* on the PPM (see Fig. 85): *OF* (or S_mS_m) is the money stock in the society; D_mD_m the social demand for money; *FP* is the equilibrium PPM (purchasing power of the monetary unit) set by the market. An imposed minimum PPM above the market (*OC*) injures the clearing "mechanism" of the market. At *OC* the money stock exceeds the money demanded. As a result, people possess a quantity of money *GH* in "unsold surplus." They try to sell their money by buying goods, but they cannot. Their money is anesthetized. To the extent that a government's over-all price maximum is effective, a part of

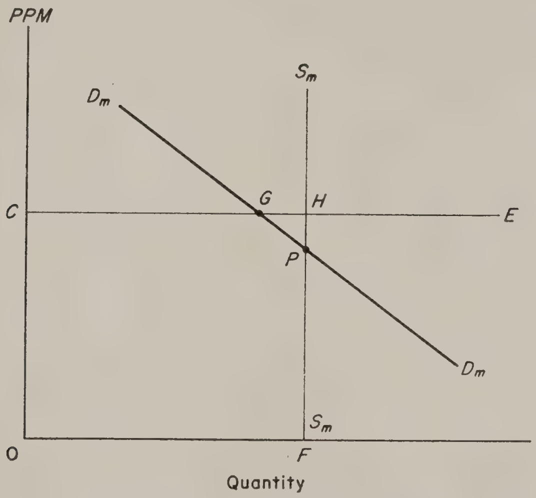


FIG. 85. EFFECT OF IMPOSING GENERAL PRICE MAXIMA

people's money becomes useless, for it cannot be exchanged. But a mad scramble inevitably ensues, with each person hoping that *his* money can be used.[21] Favoritism, lining up, bribes, etc., inevitably abound, as well as great pressure for a "black" market (i.e., *the* market) to provide a channel for the surplus money.

A general price minimum is equivalent to a *maximum* control on the PPM. This sets up an unsatisfied, excess, demand for money over the stock of money available—specifically, in the form of unsold stocks of goods in every field.

The principles of maximum and minimum price control apply to *any* prices, whatever they may be: of consumers' goods, capital goods, land or labor services, or, as we have seen, the "price" of money in terms of other goods. They apply, for example, to minimum wage laws. When a minimum wage law is effective, i.e., where it imposes a wage above the market value of a grade of labor (above the laborer's discounted marginal value product), the supply of labor services exceeds the demand, and the "unsold surplus" of labor services means *involuntary mass unemployment.* Selective, as opposed to general, minimum wage rates, create unemployment in particular industries and tend to perpetuate these pockets by attracting labor to the higher rates. Labor is eventually forced to enter less remunerative, less value-productive lines. This analysis applies whether the minimum wage is imposed by the State or by a labor union.

The reader is referred to chapter 10 above for an analysis of the rare case of a minimum wage imposed by a *voluntary* union. We saw that this creates unemployment and shifts labor to less remunerative and value-productive branches of employment, *but* that these results must be treated as voluntary. To prohibit people from joining unions and agreeing voluntarily on union wage scales and on the *mystique* of unionism would subject workers by force to the dictates of consumers and would impose a welfare loss upon the former. However, as we stated above, a spread among the workers of praxeological knowledge, of a realization that union solidarity causes unemployment and lower wage rates for many workers, would probably weaken this solidarity considerably. Empirically, on the other hand, almost all cases of effective unionism are imposed through coercion exercised by unions, i.e., through union *intervention* in the market.[22] The effects of union intervention are then the same as the same degree of government intervention would have been. As we have pointed out, the analysis of intervention applies to *whatever* agency wields the violence, whether private or governmental. Unemployment and misallocations of many workers to less efficient and lower-paying jobs again occur in this case and again involuntarily.

Our analysis of the effects of price control applies also, as Mises has brilliantly shown, to control over the price ("exchange rate") of one money in terms of another.[23] This was partially seen in Gresham's Law, one of the first economic laws to be discovered. Few have realized that this law is merely a specific instance of the general consequences of price controls. Perhaps this failure is due to the misleading formulation of Gresham's Law, which is usually phrased: "Bad money drives good money out of circulation." Taken at its face value, this is a paradox that violates the general rule of the market that the best methods of satisfying consumers tend to win out over the poorer. The phrasing has been fallaciously used even by those who generally favor the free market, to justify a State monopoly over the coinage of gold and silver. Actually, Gresham's Law should read: "Money overvalued by the State will drive money undervalued by the State out of circulation." Whenever the State sets an arbitrary value or price on one money in terms of another, it thereby establishes an effective *minimum* price control on one money and a *maximum* price control on the other, the "prices" being in terms of each other. This, for example, was the essence of bimetallism. Under bimetallism, a nation recognized gold and silver as moneys, but set an arbitrary price, or exchange ratio, between them. When this arbitrary price differed, as it was bound to do, from the free-market price (and this became ever more likely as time passed and the free-market price changed, while the government's arbitrary price remained the same), one money became overvalued and the other undervalued by the government. Thus, suppose that a country used gold and silver as moneys, and the government set the ratio between them at 16 ounces of silver:1 ounce of gold. The market price, perhaps 16:1 at the time of the price control, then changes to 15:1. What is the result? Silver is now being arbitrarily undervalued by the government and gold arbitrarily overvalued. In other words, silver is fixed cheaper than it really is in terms of gold on the market, and gold is forced to be more expensive than it really is in terms of silver. The government has imposed a price maximum on silver and a price minimum on gold, in terms of each other.

The same consequences now follow as from any effective price control. With a price maximum on silver, the gold demand for silver in exchange now exceeds the silver demand for gold (conversely, with a price minimum on gold, the silver demand for gold is less than the gold demand for silver). Gold goes begging for silver in unsold surplus, while silver becomes scarce and disappears from circulation. Silver disappears to another country or area where it can be exchanged at the free-market price, and gold, in turn, flows into the country. If the bimetallism is worldwide, then silver disappears into the "black market," and official or open exchanges are made only with gold. No country, therefore, can maintain a bimetallic system in practice, since one money will always be undervalued or overvalued in terms of the other. The overvalued always displaces the other from circulation, the latter being scarce.

Similar consequences follow from such price control as setting arbitrary exchange rates on fiat moneys (see further below) and in setting new and worn coins arbitrarily equal to one another when they discernibly differ in weight.

To sum up our analysis of price control: Directly, the utility of at least one set of exchangers will be injured by the control. Indirectly, as we find by further analysis, hidden, but just as certain, effects injure a substantial number of people who *thought* they would gain in utility from the imposed controls. The announced aim of a maximum price control is to benefit the consumer by giving him his supply at a lower price; yet the objective effect is to prevent many consumers from having the good at all. The announced aim of a minimum price control is to insure higher prices to the sellers; yet the effect will be to prevent many sellers from selling any of their surplus. Furthermore, the price controls inevitably distort the production and allocation of resources and factors in the economy, thereby injuring again the bulk of consumers. And we must not overlook the army of bureaucrats who must be financed by the binary intervention of taxation and who must administer and enforce the myriad of regulations. This army, in itself, withdraws a mass of workers from productive labor and saddles them onto the remaining producers—thereby benefiting the bureaucrats, but injuring the rest of the people.

6. *Triangular Intervention: Product Control*

Triangular interference with an exchange can alter the *terms* of the exchange or else in some way alter the nature of the product or the persons making the exchange. The latter intervention, *product control,* may regulate the product itself (e.g., a law prohibiting all sales of liquor) or the people selling or buying the product (e.g., a law prohibiting Mohammedans from selling —or buying—liquor).

Product control clearly and evidently injures all parties concerned in the exchange: the consumers who lose utility because they cannot purchase the product and satisfy their most urgent wants; and the producers who are prevented from earning a remuneration in this field and must therefore settle for lower earnings elsewhere. Losses by producers are particularly borne by laborers and landowners specific to the industry, who must accept *permanently* lower income. (Entrepreneurial profit is ephemeral anyway, and capitalists tend to earn a uniform interest rate throughout the economy.) Whereas with *price control* one could make out a *prima facie* case that at least *one* set of exchangers gains from the control (the consumers whose buying price is pushed *below* the free-market price, and the producers when the price is pushed *above*), in product control *both* parties to the exchange invariably lose. The direct beneficiaries of product control, then, are the government bureaucrats who administer the regulations: partly from the tax-created jobs that the regulations create, and partly perhaps from satisfactions gained from wielding coercive power over others.

In many cases of product prohibition, of course, inevitable pressure develops, as in price control, for the re-establishment of the market illegally, i.e., a "black market." A black market is always in difficulties because of its illegality. The product will be scarce and costly, to cover the risks to producers involved in violating the law and the costs of bribing government officials; and the more strict the prohibition and penalties, the scarcer the product will be and the higher the price. Furthermore, the illegality greatly hinders the process of distributing information about the existence of the market to consumers (e.g., by way of advertising). As a result, the organization of the market will be far less efficient, the service to the consumer of poorer quality, and prices for this reason alone will be higher than under a legal market. The premium on secrecy in the "black" market also militates against large-scale business, which is likely to be more visible and therefore more vulnerable to law enforcement. Paradoxically, product or price control is apt to serve as a monopolistic grant (see below) of privilege *to* the black marketeers. For they are likely to be very different entrepreneurs from those who would have succeeded in this industry in a legal market (for here the premium is on skill in bypassing the law, bribing government officials, etc.).[24]

Product prohibition may either be *absolute,* as in American liquor prohibition during the 1920's, or *partial.* An example of partial prohibition is compulsory *rationing,* which prohibits consumption beyond a certain amount. The clear effect of rationing is to injure consumers and lower the standard of living of everyone. Since rationing places legal maxima on specific items of consumption, it also distorts the pattern of consumers' spending. Consumer spending is coercively shifted from the goods more heavily to those less heavily rationed. Furthermore, since ration tickets are usually not transferable, the pattern of consumer spending is even more distorted, because people who do not want a certain commodity are not permitted to exchange these coupons for goods not wanted by others. In short, the nonsmoker is not permitted to exchange his cigarette coupons for someone else's gasoline coupons which have been allocated to those who do not own cars. Ration tickets therefore cripple the entire system by introducing a new type of highly inefficient quasi "money," which must be used for purchasing in addition to the regular money.[25]

One form of partial product prohibition is to forbid all but *certain selected* firms from selling a particular product. Such partial exclusion means that these firms are granted a *special privilege* by the government. If such a grant is given to one person or firm, we may call it a *monopoly* grant; if to several persons or firms, it is a *quasi-monopoly* grant.[26] Both types of grant may be called *monopolistic.* An example of this type of grant is *licensing,* where all those to whom the government refuses to give or sell a license are prevented from pursuing the trade or business. Another example is a *protective tariff* or *import quota,* which prevents competition from beyond a country's geographical limits. Of course, outright monopoly grants to a firm or compulsory cartelization of an industry are clear-cut grants of monopolistic privilege.

It is obvious that a monopolistic grant directly and immediately benefits the monopolist or quasi monopolist, whose competitors are debarred by violence from entering the field. It is also evident that would-be competitors are injured and are forced to accept lower remuneration in less efficient and value-productive fields. It is also patently clear that the consumers are injured, for they are prevented from purchasing products from competitors whom they would freely prefer. And this injury takes place, it should be noted, apart from any effect of the grant on prices.

In chapter 10 we buried the theory of monopoly price; we must now resurrect it. The theory of monopoly price, as developed there, is illusory when applied to the free market, but it applies fully in the case of monopoly and quasi-monopoly grants. For *here* we have an identifiable distinction: not the spurious distinction between "competitive" and "monopoly" or "monopolistic" price, but one between the *free-market price* and the *monopoly price.* The "free-market price" is conceptually identifiable and definable, whereas the "competitive price" is not. The theory of monopoly price, therefore, properly contrasts it to the free-market price, and the reader is referred back to chapter 10 for a description of the theory which can now be applied here. The monopolist will be able to achieve a monopoly price for the product if his demand curve is inelastic above the free-market price. We have seen above that on the free market, *every* demand curve to a firm is *elastic* above the free-market price; otherwise the firm would have an incentive to raise its price and increase its revenue. But the grant of monopoly privilege renders the consumer demand curve less elastic, for the consumer is deprived of substitute products from other potential competitors. Whether this lowering of elasticity will be sufficient to make the demand curve to the firm *inelastic* (so that gross revenue will be greater at a price higher than the free-market price) depends on the concrete historical data of the case and is not for economic analysis to determine.

When the demand curve to the firm remains elastic (so that gross revenue will be lower at a higher-than-free-market price), the monopolist will not reap any *monopoly gain* from his grant. Consumers and competitors will still be injured because their trade is prevented, but the monopolist will not gain, because his price and income will be no higher than before. On the other hand, if his demand curve is inelastic, then he institutes a monopoly price so as to maximize his revenue. His production has to be restricted in order to command the higher price. The restriction of production and higher price for the product both injure the consumers. Here the argument of chapter 10 must be reversed. We may no longer say that a restriction of production (such as in a voluntary cartel) benefits the consumers by arriving at the most value-productive point; on the contrary, the consumers are now injured because their free choice would have resulted in the free-market price. Because of coercive force applied by the State, they may not purchase goods freely from all those willing to sell. In other words, any approach *toward* the free-market equilibrium price and output point for any product benefits the consumers and thereby benefits the producers as well. Any departure *away* from the free-market price and output injures the consumers. The monopoly price resulting from a grant of monopoly privilege leads away from the free-market price; it lowers output and raises prices beyond what would be established if consumers and producers could trade freely.

And we cannot *here* use the argument that the restriction is voluntary because the consumers make their own demand curve inelastic. For the consumers are only *fully* responsible for their demand curve on the *free market;* and only *this* demand curve can be fully treated as an expression of their voluntary choice. Once the government steps in to prohibit trade and grant privileges, there is no longer wholly voluntary action. Consumers are forced, willy-nilly, to deal with the monopolist for a certain range of purchases.

All the effects which monopoly-price theorists have mistakenly attributed to voluntary cartels, therefore, *do* apply to governmental monopoly grants. Production is restricted, and factors are released for production elsewhere. But *now* we can say that this production will satisfy the consumers less than under free-market conditions; furthermore, the factors will earn less in the other occupations.

As we saw in chapter 10, there can never be lasting monopoly *profits,* since profits are ephemeral, and all eventually reduce to a uniform interest return. In the long run, monopoly returns are imputed to some *factor*. What is the factor being monopolized in this case? It is obvious that this factor is the *right* to enter the industry. In the free market, this right is unlimited to all and therefore unowned by anyone. The right commands no price on the market because everyone already has it. But here the government has conferred special privileges of entry and sale; and it is these *special* privileges or rights that are responsible for the extra monopoly gain from a monopoly price, and to which we may impute the gain. The monopolist earns a monopoly gain, therefore, *not* for owning any truly productive factor, but from owning a special privilege granted by the government. And this gain does not disappear in the long-run ERE as do profits; it is permanent, so long as the privilege remains and consumer valuations continue as they are.

Of course, the monopoly gain may well be capitalized into the asset value of the firm, so that *subsequent* owners, who invest in the firm after the capitalization took place, will be earning only the equal interest return. A notable example of the capitalization of monopoly (or rather, quasi-monopoly) rights is the New York City taxicab industry. Every taxicab must be licensed, but the city decided, years ago, not to issue any further licenses, or "medallions," so that any new cab owner must purchase his medallion from some previous owner. The (high) price of medallions on the market is then the capitalized value of the monopoly privilege.

As we have seen, all this applies to a quasi monopolist as well as to a monopolist, since the number of the former's competitors is also restricted by the grant of privilege, which makes his demand curve less elastic. Of course, *ceteris paribus,* a monopolist is in a better position than a quasi monopolist, but how much each benefits depends purely on the data of the particular case. In some cases, such as the protective tariff, the quasi monopolist will end, in the long run, by not gaining anything. For since freedom of entry is restricted only to foreign firms, the higher returns accruing to firms newly protected by a tariff will attract more domestic capital to that industry. Eventually, therefore, the new capital will drive the rate of earnings down to the interest rate usual in all of industry, and the monopolistic gain will have been competed away.[27]

Monopolistic grants can be either direct and evident, such as compulsory cartels or licenses; less direct, such as tariffs; or highly indirect, but nevertheless powerful. Ordinances closing businesses at specific hours, for example, or outlawing pushcart peddlers or door-to-door salesmen, are illustrations of laws that forcibly exclude competition and thereby grant monopolistic privileges. Similarly, *antitrust laws* and prosecutions, while seemingly designed to "combat monopoly" and "promote competition," actually do the reverse, for they coercively penalize and repress efficient forms of market structure and activity. Even such a seemingly remote action as conscription has the effect of forcibly withdrawing young men from the labor market and thereby giving their competitors a monopolistic, or rather a *restrictionist,* wage.[28] Unfortunately, we have not the space here to investigate these and other instructive cases.

7. *Binary Intervention: The Government Budget*

Binary intervention occurs, we have seen, when the intervener forces someone to transfer property to him. All government rests on the coerced levy of *taxation,* which is therefore a prime example of binary intervention. Government intervention, consequently, is not only triangular, like price control; it may also be binary, like taxation, and is therefore imbedded into the very nature of government and governmental activity.

For years, writers on public finance have been searching for the "neutral tax," i.e., for that system of taxes which would keep the free market intact. The object of this search is altogether chimerical. For example, economists have often sought uniformity of taxes, so that each person, or at least each person in the same income bracket, pays the same amount of tax. But this is inherently impossible, as we have already seen from Calhoun's demonstration that the community is inevitably divided into tax*payers* and tax-*consumers,* who, of course, cannot be said to pay taxes at all. To repeat the keen analysis of Calhoun (see note 6 above): "nor can it be otherwise; unless what is collected from each individual in the shape of taxes shall be returned to him in disbursements, which would make the process nugatory and absurd." In short, government bureaucrats *do not pay* taxes; they *consume* the tax proceeds. If a private citizen earning $10,000 income pays $2,000 in taxes, the bureaucrat earning $10,000 does not *really* pay $2,000 in taxes also; that he supposedly does is simply a bookkeeping fiction.[29] He is *actually* acquiring an income of $8,000 and paying no taxes at all.

Not only bureaucrats will be tax-consumers, but, to a lesser degree, other, private members of the population as well. For example, suppose that the government taxes $1,000 away from private people who would have spent the money on jewels, and uses it to purchase paper for government offices. This induces a shift in demand away from jewels and toward paper, a decline in the price of jewels, and a flow of resources from the jewelry industry; conversely, paper prices will tend to increase, and resources will flow into the paper industry. Incomes will decline in the jewelry industry and rise in paper.[30] Hence, the paper industry will be, to some extent, beneficiaries of the government budget: of the tax-and-expenditure process of government. But not just the paper industry. For the new money received by the paper firms will be paid out to their suppliers and original factor-owners, and so on as the ripples impinge on other parts of the economy. On the other hand, the jewelry industry, stripped of revenue, reduces *its* demands for factors. Thus the burdens and benefits of the tax-and-expenditure process diffuse themselves throughout the economy, with the strongest impact at the points of first contact—jewelry and paper.[31]

Everyone in the society will be either a net taxpayer or a tax-consumer and this to different degrees, and it will be for the data of each specific case to determine where any particular person or industry stands in this distribution process. The only certainty is that the bureaucrat or politician in office receives 100% of his governmental income from tax proceeds and pays no genuine taxes in return.

The tax-and-expenditure process, therefore, will inevitably distort the allocation of productive factors, the types of goods produced, and the pattern of incomes, from what they would be on the free market. The larger the *level* of taxing and spending, i.e., the bigger the government budget, the greater the distortion will tend to be. And moreover, the larger the budget in relation to market activity, the greater the burden of government on the economy. A larger burden means that more and more resources of society are being coercively siphoned off from the producers into the pockets of government, those who sell to government, and the subsidized favorites of government. In short, the higher the relative level of government, the narrower the base of the producers and the greater the "take" of those expropriating the producers. The higher the level of government, the less resources will be used to satisfy the desires of those consumers who have contributed to production, and the more resources will be used to satisfy the desires of nonproducing consumers.

There has been a great deal of controversy among economists on how to approach the analysis of taxation. Old-fashioned Marshallians insist on the "partial equilibrium" approach of looking only at a particular type of tax, in isolation, and then analyzing its effects; Walrasians, more fashionable today (and exemplified by the late Italian public finance expert, Antonio De Viti De Marco), insist that taxes cannot be considered at all in isolation, that they may be analyzed only in conjunction with what the government does with the proceeds. In all this, what would be the "Austrian" approach, had it been developed, is being neglected. This holds that both procedures are legitimate and necessary to analyze the taxing process fully. In short: the level of taxes-and-expenditures may be analyzed and its inevitable redistributive and distortive effects discussed; and, *within* this aggregate of taxes, individual types of taxes may then be analyzed in isolation. Neither the partial nor the general approaches should be overlooked.

There has also been a great amount of useless controversy about *which* activity of government imposes the burden on the private sector: *taxation* or *government spending.* It is actually futile to separate them, since they are both stages in the same process of burden and redistribution. Thus, suppose the government taxes the betel-nut industry one million dollars in order to buy paper for government bureaus. One million dollars' worth of resources are shifted from betel nuts to paper. This is done in *two* stages, a sort of one-two punch at the free market: first, the betel-nut industry is made poorer by taking away its money; then, the government uses this money to take paper out of the market for its own use, thus extracting resources in the second stage. Both sides of the process are a burden. In a sense, the betel-nut industry is compelled to *pay for* the extraction of paper from society; at least, it bears the immediate brunt of payment. However, even without yet considering the "partial equilibrium" problem of how or whether such taxes are "shifted" by the betel-nut industry onto other shoulders, we should also note that it is not the only one to pay; the consumers of paper certainly pay by finding paper prices raised to them.

The process can be seen more clearly if we consider what happens when taxes and government expenditures are *not* equal, when they are not simply obverse sides of the same coin. When taxes are less than government expenditures (and omitting borrowing from the public for the time being), the government creates new money. It is obvious here that government *expenditures* are the main burden, since this higher amount of resources is being siphoned off. In fact, as we shall see later when considering the binary intervention of *inflation,* creating new money is, anyway, a form of taxation.

But what of that rare case when taxation is higher than government spending? Say that the surplus is either hoarded in the government's gold supply or that the money is liquidated through deflation (see below). Thus, assume that $1,000,000 is taken from the betel-nut industry and only $600,000 is spent on paper. In this case, the larger burden is that of taxation, which pays not only for the extracted paper but also for the hoarded or destroyed money. While the government extracts only $600,000 worth of resources from the economy, the betel-nut industry loses $1,000,000 of potential resources, and this loss should not be forgotten in toting up the burdens imposed by the government's budgetary process. In short, when government expenditures and receipts differ, the "fiscal burden" on society may be very approximately gauged by whichever is the greater total.

Since taxation cannot really be uniform, the government in its budgetary process of tax-and-spend inevitably takes coercively from Peter to give to Paul ("Paul," of course, including itself). In addition to distorting the allocation of resources, therefore, the budgetary process redistributes incomes or, rather, *distributes* incomes. For the free market does *not* distribute incomes; income there arises naturally and smoothly out of the market processes of production and exchange. Thus, the very concept of "distribution" as something separate from production and exchange can arise only from the government's binary intervention. It is often charged, for example, that the free market maximizes the utility of all, and the satisfactions of all consumers, only "*given* a certain existing distribution of income." But this common fallacy is incorrect; *there is no "assumed distribution" on the free market separate from the voluntary activities of every individual's production and exchange.* The only *given* on the free market is the *property right* of every man in his own person and in the resources which he finds, produces, or creates, or which he obtains in voluntary exchange for his products or as a gift from their producers.

The binary intervention of the government's budget, on the other hand, impairs this property right of every one in his own product and *creates* the separate process and the "problem" of distribution. No longer do income and wealth flow purely from service rendered on the market; they now flow to special privilege created by the State and away from those specially burdened by the State.

There are many economists who regard the "free market" as only being free of triangular interference; such binary interference as taxation is not considered intervention in the purity of the "free market." The economists of the Chicago School—headed by Frank H. Knight—have been particularly adept at splitting man's economic activity and confining the "market" to a narrow compass. They can thus favor the "free market" (because they oppose such triangular interventions as price control), while advocating drastic binary interventions in taxes and subsidies to "redistribute" the income determined by that market. In short, the market is to be left "free" in one sphere, while being subject to perpetual harassment and reshuffling by outside coercion. This concept assumes that man is fragmented, that the "market man" is not concerned with what happens to himself as a "subject-to-government" man. This is surely an impermissible myth, which we might call the "tax illusion"—the idea that people do not consider what they earn *after* taxes, but only before taxes. In short, if A earns $9,000 a year on the market, B $5,000, and C $1,000, and the government decides to keep redistributing the incomes so that each earns $5,000, the individuals, apprised of this, are *not* going to keep foolishly assuming that they are still earning what they did before. They are going to take the taxes and subsidies into account.[32]

Thus, we see that the government budgetary process is a coercive shift of resources and incomes from producers on the market to nonproducers; it is also a coercive interference with the free choices of individuals by those constituting the government. Below, we shall analyze the nature and consequences of government spending in more detail. At this time, let us emphasize the important point that government cannot be in any way a fountain of resources; all that it spends, all that it distributes in largesse, it must first acquire in revenue, i.e., it must first extract from the "private sector." The great bulk of the revenues of government, the very nub of its power and its essence, is taxation, to which we turn in the next section. Another method is inflation, the creation of new money, which we shall discuss further below. A third method is borrowing from the public, which will be discussed briefly in Appendix A below.[33]

8. *Binary Intervention: Taxation*

A. INCOME TAXATION

Taxation, as we have seen, takes from producers and gives to others. Any increase in taxation swells the resources, the incomes, and usually the numbers of those living off the producers, while *diminishing* the production base from which these others are drawing their sustenance. Clearly, this is eventually a self-defeating process: there is a limit beyond which the top-heavy burden can no longer be carried by the diminishing stock of producers. Narrower limits are also imposed by the *disincentive* effects of taxation. The greater the amount of taxes imposed on the producers—the tax*payers*—the lower the marginal utility of work will be, for the returns from work are forcibly diminished, and the greater the marginal utility of leisure forgone. Not only that: the greater will be the incentive to shift from the ranks of the burdened taxpayers to the ranks of the tax-*consumers,* either as full-time bureaucrats or as those subsidized by the government. As a result, production will diminish even further, as people retreat to leisure or scramble harder to join the ranks of the privileged tax-consumers.[34] In the market economy, net incomes are derived from wages, interest, ground rents, and profit; and in so far as taxes strike at the earnings from these sources, attempts to earn these incomes will diminish. The laborer, faced with a tax on his wages, has less incentive to work hard; the capitalist, confronting a tax on his interest or profit return, has more incentive to consume rather than to save and invest. The landlord, a tax being imposed on his rents, will have less of a spur to allocate land sites efficiently.

It has been objected that since a man's marginal utility of money assets increases as he holds less of a stock of money, lower money income will mean an increased marginal utility of income. As a result, a tax on money incomes creates both a "substitution effect" against work and in favor of leisure (or against saving in favor of consumption) and an "income effect" working in the opposite direction. This is true, and in rare empirical cases, the latter effect will predominate. In plain language, this means that when extra penalties are placed upon man's efforts he will generally slacken them; but in some cases, he will work harder to try to offset the burdens. In the latter cases, however, we must remember that he will lose the valuable consumption good of "leisure"; he will have less leisure now than he would have if his choices were still free. Working harder under penalty is only a cause for rejoicing if we regard the matter exclusively from the point of view of those living off the producers, who will thereby benefit from the tax. The standard of living of the workers, which must include leisure, has fallen.

The income tax, by taxing income from investments, cripples saving and investment, since it lowers the return from investing below what free-market time preferences would dictate. The lower net interest return leads people to bring their savings-investment into line with the new realities; in short, the marginal savings and investments at the higher return will now be valued below consumption and will no longer be made.

There is another, unheralded reason why an income tax will particularly penalize saving and investment as against consumption. It might be thought that since the income tax confiscates a certain portion of a man's income and leaves him free to allocate the rest between consumption and investment, and since time-preference schedules remain given, the proportion of consumption to saving will remain unchanged. But this ignores the fact that the taxpayer's real income and the real value of his monetary assets have been lowered by paying the tax. We have seen in chapter 6 that, given a man's time-preference schedule, the lower the level of his real monetary assets, the higher his time-preference rate will be, and therefore the higher the proportion of his consumption to investment. The taxpayer's position may be seen in Fig. 86, which is essentially the reverse of the individual time-market diagrams in chapter 6. In the present case, money assets are *increasing* as we go rightward on the horizontal axis, while in chapter 6 money assets were declining. Let us say that the taxpayer's initial position is a money stock of *OM; tt* is his given time-preference curve. His *effective time-preference rate,* determining his consumption/investment proportion, is t_1. Now, suppose that the government levies an income tax, reducing his initial monetary assets at the start of his spending pe-

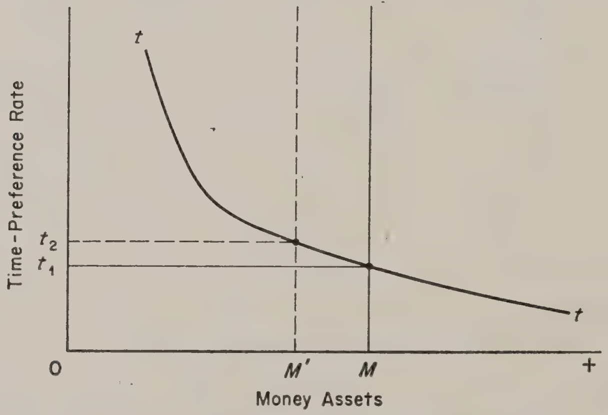


FIG. 86. EFFECT OF INCOME TAX ON TAXPAYER'S RATIO OF CONSUMPTION TO SAVING AND INVESTMENT

riod to *OM′*. His effective time-preference rate, the intersection of *tt* and the *M′* line, is now higher at t_2. He shifts to a higher proportion of consumption and a lower proportion of saving and investment.[35]

We have now seen two reasons why an income tax will shift the social proportion toward more consumption and less saving and investment. It might be objected that the time-preference reason is invalid, since the government officials and the people they subsidize will receive the tax revenues and find that *their* money stock has increased just as that of the taxpayers has declined. We shall see below, however, that no truly productive savings and investments can be made by government, its employees, or the recipients of its subsidies.

Some economists maintain that income taxation reduces savings and investment in society in yet a third way. They assert that income taxation, by its very nature, imposes a "double" tax on savings-investment as against consumption.[36] The reasoning runs as follows: Saving and consumption are really not symmetrical. All saving is directed toward enjoying more consumption in the future; otherwise, there would be no point at all to saving. Saving is abstaining from possible present consumption in return for the expectation of increased consumption at some time in the future. No one wants capital goods for their own sake. They are only the embodiment of increased consumption in the future. Saving-investment is Crusoe's building the stick to obtain more apples at a future date; it fructifies in higher consumption later. Hence, the imposition of an income tax is a "double" tax on consumption, and excessively penalizes saving and investment.[37]

This line of reasoning correctly explains the investment-consumption process. It suffers, however, from a grave defect: it is irrelevant to problems of taxation. It is true that saving is a fructifying agent. But the point is that everyone knows this; that is precisely why people save. Yet, even though they know that saving is a fructifying agent, they do not save all their income. Why? Because of their time-preferences for present consumption. Every individual, given his current income and value scales, allocates that income in the most desirable proportions between consumption, investment, and additions to his cash balance. Any other allocation would satisfy his desires less well and lower his position on his value scale. The fructifying power of saving is *already taken into account* when he makes his allocation. There is therefore no reason to say that an income tax doubly penalizes saving-investment; it penalizes the individual's entire standard of living, encompassing present consumption, future consumption, and his cash balance. It does not *per se* penalize saving any more than the other avenues of income allocation.

This Fisher argument reflects a curious tendency among economists devoted to the free market to be far more concerned about governmental measures penalizing saving and investment than they are about measures hobbling consumption. Surely an economist favoring the free market must grant that the market's voluntary consumption/investment allocations are optimal and that any government interference in this proportion, *from either direction,* is distortive of that market and of production to meet the wants of the consumers. There is nothing, after all, particularly sacred about savings; they are simply the road to future consumption. But they are, then, clearly no more important than *present* consumption, the allocations between the two being determined by the time preferences of all individuals. The economist who balks more at interference with free-market savings than he does at infringement on free-market consumption is therefore implicitly advocating statist interference in the opposite direction. He is implicitly calling for a coerced distortion of resources to lower consumption and increase investment.[38]

B. ATTEMPTS AT NEUTRAL TAXATION

So far, we have discussed the impact of a tax on an individual considered by himself. Equally important is the distortion of the market's *pattern* of factor prices and incomes, created by the way taxes bear down upon different people. The free market determines an intricate, almost infinite array and structure of prices, rates, and incomes. The imposition of different taxes disrupts these patterns and cripples the market's work of allocating resources and output. Thus, if firm A pays $5,000 a year for a certain type of labor, and firm B pays $3,000, laborers will tend to shift from B to A and thereby more efficiently serve the wants of consumers. But if the income earned at firm A is taxed $2,000 per annum, while income at B is taxed negligibly or not at all, the market inducement to move from B to A will totally or virtually disappear, perpetuating a misallocation of productive resources and hampering the growth and even the existence of firm A.

We have seen above that the quest for a *neutral tax*—a tax neutral to the market, leaving the market roughly as it was before the tax was imposed—is a hopeless venture. For there can be no uniformity in paying taxes when some people in society are necessarily taxpayers, while others are privileged tax-consumers. But even if we disregard these objections and fail to consider the redistributionist effects of government *spending* out of tax revenues, we cannot arrive at a system of neutral taxation.[39] Many writers have maintained that uniformly proportional income taxes for all would yield a neutral tax; for then, the relative ratios of incomes in society would remain the same as before. Thus, if A received $6,000 a year, B earned $3,000 and C $2,000, a 10% tax on each man would yield a "distribution" of: A, $5,400; B, $2,700; C, $1,800—the same mutual ratios as before. (This assumes, of course, no disincentive effects of the tax on the various individuals or, rather, equiproportional disincentive effects on each individual in the society—a most unlikely occurrence.) But the trouble is that this "solution" misconceives the nature of what a neutral tax would have to be. For a tax truly neutral to the free market would not be one that left income patterns the same as before; *it would be a tax which would affect the income pattern, and all other aspects of the economy, in the same way as if the tax were really a free-market price.*

This is a very important correction; for we must surely realize that when a service is sold at a certain price on the free market, this sale emphatically does *not* leave income "distribution" the same as before. For, normally, market prices are *not* proportional to each man's income or wealth, but are uniform *in the sense* *of equal to everyone,* regardless of his income or wealth or even his eagerness for the product. A loaf of bread does *not* cost a multimillionaire a thousand times as much as it costs the average man. If, indeed, the market really behaved in this way, there would soon be no market, for there would be no advantage whatever in earning money. The more money one earned, the more, *pari passu,* the price of every good would be raised to him. Therefore, the entire civilized money economy and the system of production and division of labor based upon it would break down. Far from being "neutral" to the free market, then, a proportional income tax follows a principle which, if consistently applied, would eradicate the market economy and the entire monetary economy itself.

It is clear, then, that equal taxation of everyone—the so-called "head tax" or "poll tax"—would be a far closer approach to the goal of neutrality. But even here, there are serious flaws in its neutrality, entirely apart from the ineluctable taxpayer-tax-consumer dichotomy. For one thing, goods and services on the free market are purchased only by those freely willing to obtain them at the market price. Since a tax is a compulsory levy rather than a free purchase, it can never be assumed that each and every member of society would, in a free market, pay this equal sum to the government. In fact, the very compulsory nature of taxation implies that far less revenue would be paid in to the government were it conducted in a voluntary manner. Rather than being neutral, therefore, the equal tax would distort market results by imposing undue levies on at least three groups of citizens: the poor, the uninterested, and the hostile, i.e., those who, for one reason or another, would *not* have voluntarily paid these equal sums to the government.

Another grave problem in treating the equal tax as akin to a free-market price is that we do not know what "services" of government the people are supposed to be "purchasing." For example, if the government uses the tax to subsidize a certain favored group, it is difficult to know what sort of "service" the payers of the head tax are reaping from this act of government. But let us take a seemingly clear-cut case of pure service, police protection, and let us assume that the head tax is being paid for this expenditure. The free-market rule is that equal prices are paid for equal services; but what, here, is an "equal service"? Surely, the service of police protection is of far greater magnitude in an urban crime center than it is in some sleepy backwater, where crime is rare. Police protection will certainly cost more in the crime-ridden area; hence, if it were supplied on the market, the price paid there would be higher than in the backwater. Furthermore, a person under particular threat of crime, and who might require greater surveillance, would have to pay a higher police fee. A uniform tax would be below market price in the dangerous areas and above it in the peaceful areas. To approach neutrality, then, a tax would have to vary in accordance with the *costs* of services and not be uniform.[40] This is the neglected *cost principle* of taxation.

The cost principle, however, is hardly neutral either. Apart from the inexorable taxpayer-tax-consumer problem, there is, again, the problem of how a "service" is to be defined and isolated. What is the "service" of redistribution from Peter to Paul, and what is the "cost" for which Peter is to be assessed? And even if we confine the discussion to such common services as police protection, there are grave flaws. In the first place, the costs of government, as we shall see further below, are bound to be much higher than those of the free market. Secondly, the State cannot calculate well and therefore cannot gauge its costs accurately. Thirdly, costs are equal to prices only in equilibrium; since the economy is never in equilibrium, costs are never a precise estimate of what the free-market price would have been. And finally, as in the equal tax, and in contrast to the free market, the taxpayer never *demonstrates* his benefit from the governmental act; it is simply and blithely assumed that he would have purchased the service voluntarily at this price.

Still another attempt at neutral taxation is the *benefit principle,* which states that a tax should be levied equal to the benefit which the individuals receive from the government service. It is not always realized what this principle would mean: e.g., that recipients of welfare benefits would have to pay the full costs of these benefits. Each recipient of government welfare would then have to pay *more* than he received, for he would also have to pay the "handling" costs of government bureaucracy. Obviously, there would be no such welfare or any other subsidy payments if the benefit principle were maintained. Even if we again confine the discussion to services like police protection, grave flaws still remain. Let us again disregard the persistent taxpayer-tax-consumer dichotomy. A fatal problem is that we cannot measure benefits or even know whether they exist. As in the head tax and cost principles, there is here no free market where people can *demonstrate* that they are receiving a benefit from the exchange greater than the value of the goods they surrender. In fact, since taxes are levied by coercion, it is clear that people's benefits from government are considerably *less* than the amount that they are required to pay, since, if left free, they would contribute less to government. The "benefit," then, is simply assumed arbitrarily by government officials.

Furthermore, even if the benefit were freely demonstrable, the *benefit principle* would not approach the process of the free market. For, once again, individuals pay a *uniform price* for services on the free market, regardless of the extent of their subjective benefits. The man who would "walk a mile for a Camel" pays no more, ordinarily, than the man who couldn't care less. To tax everyone in accordance with the benefit he receives, then, is diametrically opposed to the market principle. Finally, if everyone's benefit is taxed away, there would be no reason for him to make the exchange or to receive the government service. On the market, not all people, not *even* the marginal buyers, pay the full amount of their benefit. The supramarginal buyers obtain unmeasurable surplus benefit, and *so do* the marginal buyers, for without such a surplus they would not buy the product. Moreover, for such services as police protection, the benefit principle would require the poor and the infirm to pay *more* than the rich and the able, since the former may be said to benefit more from protection. Finally, it should be noted that if each person's benefit from government is to be taxed away, the bureaucrats, who receive all their income from the government, would have to return their whole salary to the government and so serve without pay.[41]

We have thus seen that no principle of taxation can be neutral with respect to the free market. *Progressive* taxation, where each man pays *more* than proportionately to his income, of course makes no attempt at neutrality. If the proportional tax embodies a principle destructive to the entire market economy and the monetary economy itself, then the progressive tax does so still more. For the progressive tax penalizes the able and efficient in even greater proportion than their relative ability and efficiency. Progressive rates are a particular disincentive against especially able work or entrepreneurship. And since such ability is engaged in serving the consumer, a progressive tax levies a particular burden on the consumers as well.

In addition to the two ways discussed above by which income taxation penalizes saving, the progressive tax imposes an added penalty. For empirically, in most cases, the wealthy save and invest proportionately more of their incomes than the lower-income groups. There is, however, no apodictic, praxeological reason why this must always be so. The rule would not hold, for example, in a country where the wealthy bought jewelry while the poor thriftily saved and invested.

While the progressive principle is certainly highly destructive of the market, most conservative, pro-free-market economists tend to overweigh its effects and to underweigh the destructive effects of proportional taxation. Proportional income taxation has many of the same consequences, and therefore the *level* of income taxation is generally more important for the market than the degree of progressivity. Thus, society A may have a proportional income tax requiring every man to pay 50% of his income; society B may have a very steeply progressive tax requiring a poor man to pay ¼% and the richest man 10% of his income. The rich man will certainly prefer society B, *even though* the tax is progressive—demonstrating that it is not so much the progressivity as the height of his tax that burdens the rich man.

Incidentally, the poor producer, with a lower tax upon him, will also prefer society B. This demonstrates the fallacy in the common conservative complaint against progressive taxation that it is a means "for the poor to rob the rich." For both the poor man and the rich man have, in our example, chosen progression! The reason is that the "poor" do not "rob the rich" under progressive taxation. Instead, it is the State that "robs" both through taxation, whether proportional or progressive.

It may be objected that the poor benefit from the State's expenditures and subsidies from the tax proceeds and thus do their "robbing" indirectly. But this overlooks the fact that the State can spend its money in many different ways: it may consume the products of specific industries; it may subsidize some or all of the rich; it may subsidize some or all of the poor. The fact of progressivity does not *in itself* imply that the "poor" are being subsidized en masse. Indeed, if some of the poor are being subsidized, others will probably not be, and so these latter net taxpayers will be "robbed" along with the rich. In fact, since there are usually far more poor than rich, the poor en masse may very well bear the greatest burden of even a progressive tax system.

Of all the possible types of taxes, the one most calculated to cripple and destroy the workings of the market is the *excess profits tax*. For of all productive incomes, profits are a relatively small sum with enormous significance and impact; they are the motor, the driving force, of the entire market economy. Profit-and-loss signals are the prompters of the entrepreneurs and capitalists who direct and ever redirect the productive resources of society in the best possible ways and combinations to satisfy the changing desires of consumers under changing conditions. With the drive for profit crippled, profit and loss no longer serve as an effective incentive, or, therefore, as the means for economic calculation in the market economy.

It is curious that in wartime, precisely when it would seem most urgent to preserve an efficient productive system, the cry invariably goes up for "taking the profits out of war." This zeal never seems to apply so harshly to the clearly war-borne "profits" of steel workers in higher wages—only to the profits of entrepreneurs. There is certainly no better way of crippling a war effort. In addition, the "excess" concept requires some sort of norm above which the profit can be taxed. This norm may either be a certain rate of profit, which involves the numerous difficulties of measuring profit and capital investment in every firm; or it may refer to profits at a base period before the war started. The latter, the general favorite because it specifically taps *war* profits, makes the economy even more chaotic. For it means that while the government strains for more *war* production, the excess profits tax creates every incentive toward lower and inefficient war production. In short, the EPT tends to freeze the process of production as of the peacetime base period. And the longer the war lasts, the more obsolete, the more inefficient and absurd, the base-period structure becomes.

C. SHIFTING AND INCIDENCE: A TAX ON AN INDUSTRY

No discussion of taxation, however brief, can overlook the famous problem of "the shifting and incidence" of taxation. In brief, who pays a tax? The person on whom it is levied, or someone else to whom the former is able to "shift" the tax? There are still economists, incredibly, who hew to the old nineteenth-century "equal diffusion" theory of taxation, which simply closes the problem by proclaiming that "all taxes are shifted to everyone," so that there is no need to analyze each one in particular.[42] This obscurantist tendency is fostered by treating "shifting" in too broad a way. Thus, if an income tax is levied on Jones at 80%, this will hurt *not only* Jones, but also—by decreasing Jones' incentives as well as capacities—other consumers by reducing Jones' work and savings. It is therefore true that the *effects* of taxation diffuse outward from the center of the target. But this is far from saying that Jones can simply shift the tax burden onto the shoulders of others. The concept of "shifting" will here be limited to the case where the payment of a tax can be directly transferred *from* the original payer *to* someone else, and will not be used when others suffer *in addition* to the original taxpayer. The latter may be called the "indirect effects" of the tax.

The first rule of shifting is that *an income tax cannot be shifted.* This formerly accepted truth in economics is now countered with the popular assumption that, for example, a tax on wages will spur unions to demand higher wages to compensate for the tax, and that therefore the tax on wages is shifted "forward" onto the employer, who, in turn, shifts it again forward onto the body of consumers. And yet almost every step in this commonly proclaimed sequence is an egregious fallacy. It is absurd, in the first place, to think that workers or unions wait quietly for a tax to galvanize them into making demands. Workers *always* want higher wages; unions always demand more. The question is: Will they get more? There is no reason to think that they can. A worker can get only the value of the discounted marginal productivity of his labor. No clamor will raise that productivity, and therefore none can raise the wage he earns from his employer. Union demands for higher wages will be treated as usual, i.e., they can be satisfied only at the cost of the unemployment of some of the work force in that industry. But this is true whether or not there has been a tax on wages; the tax will have nothing to do with the final wage set on the market.

The idea that the increased cost will be passed on to the consumer by the employer is an illustration of perhaps the single most widespread fallacy on taxation: that businessmen can simply shift their higher costs forward onto the consumers in the form of higher prices. All the economic theory expounded in this book shows the error of this doctrine. For the price of a given product is set by the demand schedules of the consumers. There is nothing in higher costs or higher taxes which, *per se,* increases these schedules; hence, *any* change in selling prices, whether higher or lower, will *decrease* the revenues of the business involved. For each business, on the market, tends to be, at all times, at its "maximum profit point" in relation to the consumers. Prices are already at their point of maximum return for the business; therefore, higher taxes or other costs imposed on the firm will reduce their net incomes rather than be smoothly and easily passed on to consumers. We thus arrive at this significant conclusion: *no tax* (not just an income tax) *can ever be shifted forward.*

Suppose that a particularly heavy tax—of whatever type—has been laid on a specific industry: say the liquor industry. What will be the effects? As we have noted, the tax will not simply be "passed on" to the consumers.[43] Instead, the price of liquor will remain the same; the net income of the firms will decline. This will mean that returns will be lower to capital and enterprise in liquor than in other industries of the economy; marginal liquor firms will suffer losses and go out of business; and, in general, productive resources of all types will flow out of liquor and into other industries. The *long-run effect,* therefore, is to decrease the supply of liquor produced, and therefore, by the law of supply and demand, to raise the price of liquor on the market. However, as we have said above, this process—this diffusion of suffering over the economy—is hardly "shifting." For the tax is not simply "passed on"; it only permeates to the consumers *through* hurting the industry taxed. The final result will be a distortion of the factors of production; fewer goods are now being produced than the consumers would prefer in the liquor industry; and too many goods, relatively to liquor, are being produced in the other industry.

Taxes, in short, can more readily be "shifted backward" than forward. Strictly, the result is not shifting because it is not a painless process. But it is clear that the backward process (backward to the factors of production) happens more quickly and directly than the effects on consumers. For losses or lowered profits to liquor firms will immediately lower their demand for land, labor and capital factors of production; this falling of demand schedules will lower wages and rents earned in the liquor industry; and these lower earnings will induce a shift of labor, land and capital out of liquor and into other industries. The rapid "backward-shifting" is in harmony with the "Austrian" theory of consumption and production developed in this volume; for prices of factors are determined by the selling prices of the goods which they produce, and *not vice versa* (which would have to be the conclusion of the naive "shifting-forward" doctrine).

It should be noted that, in some cases, the industry itself can welcome a tax upon it, for the sake of conferring an indirect, but effective, monopolistic privilege on the supramarginal firms. Thus, a flat "license" tax will confer a particular privilege on the more heavily capitalized firms, which can more easily afford to pay the fee.

D. SHIFTING AND INCIDENCE: A GENERAL SALES TAX

The most popular example of a tax supposedly shifted forward is the *general sales tax*. Surely, for example, if the government imposes a uniform 20% tax on all retail sales, and if we can make the simplifying assumption that the tax can be equally well enforced everywhere, then business will simply "pass on" the 20% increase in all prices to consumers. In fact, however, there is no way for prices to increase at all! As in the case of one particular industry, prices were previously set, or approximately so, at the points of maximum net revenue for the firms. Stocks of goods or factors have not yet changed, and neither have demand schedules. How then could prices rise? Moreover, if we look at the general array of prices, as is proper when dealing with a general sales tax, these are determined by the supply of and the demand for money, from the goods and money sides. For the general array of prices to rise, there must be either an increase in the supply of money, a decrease in the demand schedule for money, or both. Nothing in a general sales tax causes a change in either of these determinants.[44]

Furthermore, the long-run effects of a general sales tax on prices will be smaller than in the case of an equivalent partial excise tax. A tax on a specific industry, such as liquor, will push resources out of this industry and into others, and therefore the relative price of the taxed commodity will eventually rise. In a general, uniformly enforced sales tax, however, there is no room for such shifts of resources.[45]

The myth that a sales tax can be shifted forward is comparable to the myth that a general union-imposed wage increase can be shifted forward to higher prices for consumers, thereby "causing inflation." There is here no way that the general array of prices can rise, and the only possible result of such a wage increase is mass unemployment.[46]

In considering the general sales tax, many people are misled by the fact that the price paid by the consumer necessarily *includes* the tax. If someone goes to a movie and pays $1.00 admission, and if he sees prominently posted the information that this covers a "price" of $.85 and a tax of $.15, he tends to conclude that the tax has simply been added on to the "price." But $1.00 is the price, not $.85, the latter sum simply being the revenue accruing to the firm after taxes. The revenue to the firm has, in effect, been *reduced* to allow for payment of taxes.

This is precisely the consequence of a general sales tax. Its immediate impact lowers the gross revenue of firms by the amount of the tax. In the long run, of course, firms cannot pay the tax, the loss in gross revenue of firms being imputed backward to interest income by capitalists and to wages and rents earned by owners of original factors—labor and ground land. A decrease in gross revenue to retail firms is reflected back to a decreased demand for the products of all the higher-order firms. The major result of a general sales tax is a general reduction in the net revenues accruing to original factors. The sales tax has been *shifted backwards* to original factor returns—to interest and to all wages and ground rents. No longer does every original factor of production earn its discounted marginal product. Original factors now earn *less* than their DMVP's, the reduction consisting of the sales tax paid to the government.

Let us now integrate this analysis of the incidence of a general sales tax with our previous general analysis of the benefits and burdens of taxation. This is accomplished by remembering that the proceeds of taxation are, in turn, spent by the government. Whether or not the government spends the money for resources for its own activities or simply transfers the money to people it subsidizes, the effect is to *shift* consumption and investment demand from private hands to the government or to government-supported individuals, by the amount of the tax revenue. The tax has been ultimately levied on the *incomes* of original factors, and the money transferred from their hands to the government. The income of the government and of those subsidized by the government has been increased at the expense of the tax producers, and therefore consumption and investment demands on the market have been shifted from the producers to the expropriators by the amount of the tax. As a consequence, the value of the monetary unit will remain unchanged (barring a difference in demands for money between the taxpayers and the tax-consumers), but the *array* of prices will shift in accordance with the shift in demands. Thus, if the market has been spending heavily on clothing, and the government uses the revenue mostly for the purchase of arms, there will be a fall in the price of clothes and a rise in the price of arms, and a tendency for nonspecific factors to shift out of the production of clothing and into the production of armaments.

As a result, there will not finally be, as might be assumed, a proportional 20% fall in all original factor incomes as the result of a 20% general sales tax. Specific factors in industries that have lost business from the shift from private to governmental demand will lose proportionately more in income; specific factors in industries gaining in demand will lose proportionately less—some may gain so much as to gain absolutely from the change. Nonspecific factors will not be affected as much proportionately, but they too will lose and gain according to the difference that the concrete shift in demand makes in their marginal value productivity.

It should be carefully noted that the general sales tax is a conspicuous example of *failure to tax consumption*. The sales tax is commonly *supposed* to penalize consumption, rather than income or capital. Yet we find that the sales tax reduces, not just consumption, but the *incomes* of original factors. *The general sales tax is therefore an income tax,* albeit a rather haphazard one. Many "right-wing" economists have advocated general sales taxation, as opposed to income taxation, on the grounds that the former taxes consumption but not savings-investment; many "left-wing" economists have opposed sales taxation for the same reason. Both are mistaken; the sales tax is an income tax, though of a more haphazard and uncertain incidence. The major effect of the general sales tax will be that of the income tax—to reduce the consumption *and* the saving-investment of the taxpayers.[47] In fact, since, as we have seen, the income tax by its nature falls more heavily on savings-investment than on consumption, we reach the paradoxical and important conclusion that a tax on *consumption* will fall more heavily on *savings-investment* than on consumption in its ultimate incidence.

E. A TAX ON LAND VALUES

Wherever taxes fall, they blight, hamper, and distort the productive activity of the market. Clearly, a tax on wages will distort the allocation of labor effort, a tax on profits will cripple the profit-and-loss motor of the economy, a tax on interest will tend to consume capital, etc. One commonly conceded exception to this rule is the doctrine of Henry George that ground-landowners perform no productive function and that therefore the government may safely tax site value without reducing the supply of productive services on the market. This is the *economic,* as distinguished from the moral, rationale for the famous "single tax." Unhappily, very few economists have challenged this basic assumption, the single-tax proposal being generally rejected on grounds purely pragmatic ("there is no way in practice of distinguishing site from improvement value of land") or conservative ("too much has been invested in land to expropriate the landowners now").[48]

Yet this central Georgist contention is completely fallacious. The owner of ground land performs a very important productive service. He finds, brings into use, and then allocates, land sites to the most value-productive bidders. We must not be misled by the fact that the physical stock of land is fixed at any given time. In the case of land, as of other material goods, it is not just the physical good that is being sold, but a whole bundle of services along with it—among which is the service of transferring ownership from seller to buyer, and doing so efficiently. Ground land does not simply exist; it must be *served to* the user by the owner (one man, of course, can perform both functions when the land is "vertically integrated").[49] The landowner earns the highest ground rents by allocating land sites to their most value-productive uses, i.e., to those uses most desired by consumers. In particular, we must not overlook the importance of *location* and the productive service of the site-owner in assuring the most productive locations for each particular use.

The view that bringing sites into use and deciding upon their location is not really "productive" is a vestige from the old classical view that a service which does not tangibly "create" something physical is not "really" productive.[50] Actually, this function is just as productive as any other, and a particularly vital function it is. To hamper and destroy this function would wreck the market economy.[51]

F. TAXING "EXCESS PURCHASING POWER"

In this necessarily hasty overview of the high spots of taxation theory, we have space for only one more comment: a criticism of the very common view that, in a business boom, the government should increase taxation "in order to sop up excess purchasing power," and thereby halt the inflation and stabilize the economy. We shall discuss the problems of inflation, stabilization, and the business cycle below; here, let us note the oddity of assuming that a *tax* is somehow less of a social cost, less of a burden, than a *price*. Thus, suppose, in a boom, that Messrs. A, B, and C, with the money they have on hand, would spend a certain amount on some commodity—say pipes—at a certain market price, e.g., $10 per pipe. The government decides that this is a most unfortunate situation, that the market price is—by some arbitrary, undivulged standard—"too high," and that therefore it must help its subjects by taxing their money away from them, and thus lowering prices. Suppose, indeed, that A, B, and C are taxed sufficiently to lower the pipe price to, say, $8. By what reasoning are they better off, now that taxes have been increased by precisely the amount that their monetary funds have dwindled? In short, the "tax price" has gone up in order that the prices of other goods may decline. Why is a voluntary price, paid willingly by buyers and accepted by sellers, somehow "bad" or burdensome for the buyers, while at the same time a "price" levied compulsorily on the same buyers for dubious governmental services for which they have not demonstrated a need is somehow "good"? Why are high prices burdensome and high taxes not?

9. *Binary Intervention: Government Expenditures*[52]

A. THE "PRODUCTIVE CONTRIBUTION" OF GOVERNMENT SPENDING

Government expenditures are a coerced transfer of resources from private producers to the uses preferred by government officials. It is customary to classify government spending into two categories: *resource-using,* and *transfer.* Resource-using expenditures frankly shift resources from private persons in society to the use of government: this may take the form of hiring bureaucrats to work for government—which shifts labor resources directly—or of buying products from business firms. Transfer payments are pure subsidy spending—when the government takes from Peter to pay Paul. It is true that, in the latter case, the government gives "Paul" money to decide the allocation as he wishes, and in a sense we may analyze the two types of spending separately. But the similarities here are greater than the differences. For, in both cases, resources are seized from private producers and shifted to the uses which government officials think best. After all, when a bureaucrat receives his government salary, this payment is in the same sense a "transfer payment" from the taxpayers, and the bureaucrat is also free to decide how further to allocate the income at his command. In both cases, money and resources are shifted from producers to nonproducers, who consume or otherwise use them.[53]

This type of analysis of government has been neglected because economists and statisticians tend to assume, rather blithely, that government expenditures are a measure of its productive contribution to society. In the "private sector" of the economy, the value of productive output is sensibly gauged by the amount of money that consumers spend voluntarily on that output. Curiously, on the other hand, the government's "productive output" is gauged, not by what is *spent on* government, but by what government itself spends! No wonder that grandiose claims are often made for the unique productive power of government spending, when a mere increase in that spending serves to raise the government's "productive contribution" to the economy.[54]

What, then, *is* the productive contribution of government? Since the value of government is not gauged on the market, and the payments to the government are not voluntary, it is impossible to estimate. It is impossible to know how much would be paid in to the government were it purely voluntary, or indeed, whether one central government in each geographical area would exist at all. Since, then, the only thing we do know is that the tax-and-spend process diverts income and resources from what they would have been doing in the "private sector," we must conclude that the government's productive contribution to the economy is precisely zero. Furthermore, even if it be objected that governmental services are worth *something,* it would have to be noted that we are again suffering from the error pointed out by Bastiat: a sole emphasis on what is *seen,* to the neglect of what is *not* seen. We may see the government's hydroelectric dam in operation; we do *not* see the things that private individuals would have done with the money—whether buying consumers' goods or investing in producers' goods—but which they were compelled to forgo. In fact, since private consumers would have done something else, something more desired, and therefore from their point of view more *productive,* with the money, we can be sure that the loss in productivity incurred by the government's tax and spending is greater than whatever productivity it has contributed. In short, strictly, the government's productivity is not simply zero, but *negative,* for it has imposed a loss in productivity upon society.[55]

Government expenditure is often referred to as "investment" resulting in "capital." And we have heard much in recent years about Soviet and other multi-Year Plans busily engaged in building up "capital" by government action. Yet it is illegitimate to use the term "capital" for government expenditures. Capital is the status of productive goods along the path to eventual consumption. In any sort of division-of-labor economy, capital goods are built, not for their own sake by the investor, but in order to use them to produce lower-order and eventually consumers' goods. In short, a characteristic of an investment expenditure is that the good in question is not being used to fulfill the needs of the investor, but of someone else—the consumer. Yet, when government confiscates resources from the private market economy, it is precisely defying the wishes of the consumers; when government invests in any good, it does so to serve the whims of government officials, not the desires of consumers. Therefore, no government expenditures can be considered genuine "investment," and no government-owned assets can be considered capital. Government expenditures are divisible into two parts: *consumption* expenditures by government officials, beneficiaries of government subsidies, and other nonproductive recipients; and *waste* expenditures, where government officials really believe that they are "investing" in "capital." These waste expenditures result in *waste assets.*[56] The consumption of the governmentally privileged is, of course, in a different category from private consumption, since it is necessarily *at the expense* of the private consumption of producers. We may therefore call the former "antiproductive consumption." [57]

B. SUBSIDIES AND TRANSFER PAYMENTS

Let us delve a little further into the typology of government spending. Transfer spending or subsidies distort the market by coercively penalizing the efficient for the benefit of the inefficient. (And it does so even if the firm or individual is efficient without a subsidy, for its activities are then being encouraged beyond their most economic point.) Subsidies prolong the life of inefficient firms and prevent the flexibility of the market from fully satisfying consumer wants. The greater the extent of government subsidy, the more the market is prevented from working, the more resources are frozen in inefficient ways, and the lower will be the standard of living of everyone. Furthermore, the more government intervenes and subsidizes, the more caste conflict will be created in society, for individuals and groups will benefit only *at one another's expense.* The more widespread the tax-and-subsidy process, the more people will be induced to abandon production and join the army of those who live coercively off production. Production and living standards will be progressively lowered as energy is diverted from production to politics and as government saddles a dwindling base of production with a growing and more topheavy burden of the State-privileged. This process will be all the more accelerated because those who succeed in any activity will invariably tend to be those who are best at performing it. Those who particularly flourish on the free market, therefore, will be those most adept at production and at serving their fellow men; those who succeed in the political struggle for subsidies, on the other hand, will be those most adept at wielding coercion or at winning favors from wielders of coercion. Generally, different people will be in the different categories of the successful, in accordance with the universal specialization of skills. Furthermore, for those who are skillful at both, the tax-and-subsidy system will encourage and promote their predatory skills and penalize their productive ones.

A common example of direct transfer subsidy is governmental *poor relief*. State poor relief is clearly a *subsidization of poverty,* for men are now automatically entitled to money from the State because of their poverty. Hence, the marginal disutility of income forgone from leisure diminishes, and idleness and poverty tend to increase further, which in turn increases the amount of subsidy that must be extracted from the taxpayers. Thus, a system of legally subsidized poverty tends to call forth more of the very poverty that is supposedly being alleviated. When, as is generally the case, the amount of subsidy depends directly on the number of children possessed by the pauper, there is a further incentive for the pauper to breed more children than otherwise and thereby multiply the number of paupers—and even more dependent paupers—still further.[58] The sincerity of the State's desire to promote charity towards the poor may be gauged by two perennial drives of government: to suppress "charity rackets" and to drive individual beggars off the streets because the "government makes plenty of provision for them." [59] The effect of both measures is to cripple voluntary individual gifts of charity and to force the public to route its giving into the channels approved by, and tied in with, government officialdom.

Similarly, governmental *unemployment relief,* often supposed to help in curing unemployment, has the precisely reverse effect: it subsidizes and intensifies unemployment. We have seen that unemployment arises when laborers or unions set a minimum wage above what they could obtain on the unhampered market. Tax aid helps them to keep this unrealistic minimum and hence prolongs the period of unemployment and aggravates the problem.

C. RESOURCE-USING ACTIVITIES

Let us now return to the resource-using activities of government, where the State professes to be providing a service of some sort to the public. Government "service" may be either furnished free or sold at a price to users. "Free" services are particularly characteristic of government. Police and military protection, fire-fighting, education, parks, some water supply come to mind as examples. The first point to note, of course, is that these services are not and cannot be truly *free*. A free good, as we saw early in this book, would not be a good and hence not an object of human action; it would simply exist in superabundance for all. If a good does not exist aplenty for all, then the resource is scarce, and supplying it costs society other goods forgone. Hence it cannot be free. The resources needed to supply the free governmental service are extracted from the rest of production. Payment is made, however, not by users on the basis of their voluntary purchases, but by a coerced levy on the taxpayers. A basic split is thus effected between *payment* and *receipt of service.* This split is inherent in all government operations.

Many grave consequences follow from the split and from the "free" service as well. As in all cases where price is below the free market price, an enormous and excessive demand is stimulated for the good, far beyond the supply of service available. Consequently, there will always be "shortages" of the free good, constant complaints of insufficiency, overcrowding, etc. An illustration is the perpetual complaints about police insufficiency, particularly in crime-ridden districts, about teacher and school shortages in the public school system, about traffic jams on government-owned streets and highways, etc. In no area of the free market are there such chronic complaints about shortages, insufficiencies, and low quality service. In all areas of private enterprise, firms try to coax and persuade consumers to buy more of their product. Where government owns and operates, on the other hand, there are invariably calls on consumers for patience and sacrifice, and problems of shortages and deficiencies continually abound. It is doubtful if any private enterprise would ever do what the New York City and other governments have done: exhort consumers to use *less* water. It is also characteristic of government operation that when a water shortage develops, it is the *consumers* and not the government "enterprisers" who are blamed for the shortage. The pressure is on consumers to sacrifice, and to use less, while in private industry the (welcome) pressure is on entrepreneurs to supply more.[60]

The well-known inefficiencies of government operation are *not* empirical accidents, resulting perhaps from the lack of a civil-service tradition. They are *inherent* in all government enterprise, and the excessive demand fomented by free and other underpriced services is just one of the many reasons for this condition.

Free supply not only subsidizes the users at the expense of non-using taxpayers; it also misallocates resources by failing to supply the service where it is most needed. The same is true, to a lesser extent, wherever the price is under the free-market price. On the free market, consumers can dictate the pricing and thereby assure the best allocation of productive resources to supply their wants. In a government enterprise, this cannot be done. Let us take again the case of the free service. Since there is no pricing, and therefore no exclusion of submarginal uses, there is no way that the government, even if it wanted to, could allocate its services to their most important uses and to the most eager buyers. All buyers, all uses, are artificially kept on the same plane. As a result, the most important uses will be slighted. The government is faced with insuperable allocation problems, which it cannot solve *even to its own satisfaction.* Thus, the government will be confronted with the problem: Should we build a road in place A or place B? There is no rational way whatever by which it can make this decision. It cannot aid the private consumers of the road in the best way. It can decide only according to the whim of the ruling government official, i.e., only if the *government officials* do the "consuming," and not the public.[61] If the government wishes to do what is best for the public, it is faced with an impossible task.

D. THE FALLACY OF GOVERNMENT ON A "BUSINESS BASIS"

Government may either subsidize deliberately by giving a service away free, or it may genuinely try to find the true market price, i.e., to "operate on a business basis." The latter is often the cry raised by conservatives—that government enterprise be placed on a business footing, that deficits be ended, etc. Almost always this means raising the price. Is this a rational solution, however? It is often stated that a single government enterprise, operating within the sphere of a private market and buying resources from it, can price its services and allocate its resources efficiently. This, however, is incorrect. *There is a fatal flaw* that permeates every conceivable scheme of government enterprise and ineluctably prevents it from rational pricing and efficient allocation of resources. Because of this flaw, government enterprise can *never* be operated on a "business" basis, no matter how ardent a government's intentions.

What is this fatal flaw? It is the fact that government can obtain virtually unlimited resources by means of the coercive tax power (i.e., limited only by the total resources of society). Private businesses must obtain their funds from private investors. This allocation of funds by investors, based on time preference and foresight, "rations" funds and resources to the most profitable and therefore the most serviceable uses. Private firms can get funds *only* from consumers and investors; they can get funds, in other words, only from people who value and buy their services and from savers who are willing to risk investment of their saved funds in anticipation of profit. In short, payment and service are, we repeat, indissolubly linked on the market. But government, on the other hand, can get as much money as it likes. The free market therefore provides a "mechanism," which we have analyzed in detail, for allocating funds for future and present consumption, for directing resources to their most value-productive uses for all the people. It thereby provides a means for businessmen to allocate resources and to price services to insure optimum use. Government, however, has no checkrein on itself, i.e., no requirement of meeting a test of profit-and-loss or valued service to consumers, to permit it to obtain funds. Private enterprise can get funds only from satisfied, valuing customers and from investors guided by present and expected future profits and losses. Government gets more funds at its own whim.

With the checkrein gone, gone also is any opportunity for government to allocate resources rationally. How can it know whether to build road A or road B, whether to "invest" in a road or a school—in fact, how much to spend for all of its activities? There is no rational way that it can allocate funds or even decide how much to have. When there is a shortage of teachers or schoolrooms or police or streets, the government and its supporters have only one answer: more money. The people must relinquish more of their money to the government. Why is this type of answer never offered on the free market? The reason is that money must always be *withdrawn* from some other use in consumption or investment—and this withdrawal must be justified. On the market, justification is provided by the test of profit and loss—the indication that the most urgent wants of the consumers are being satisfied. If an enterprise or product is earning high profits for its owners, and these profits are expected to continue, more money *will be* forthcoming; if not, and losses are being incurred, money will flow *out* of the industry. The profit-and-loss test serves as the critical guide for directing the flow of productive resources. No such guide exists for government, which therefore has no rational way to decide *how much* money to spend in total or in each specific line. The more money it spends, the more service, of course, it can supply—but where to stop? [62]

Proponents of government enterprise may retort that the government should simply tell its bureau to act *as if* it were a profit-making enterprise and to establish itself in the same way as a private business. There are two basic flaws in this theory: (1) It is impossible to *play* enterprise. Enterprise means risking one's own money in investment. Bureaucratic managers and politicians have no real incentive to develop entrepreneurial skills, to really adjust to consumer demands. They do not risk loss of their money in the enterprise. (2) Aside from the question of incentives, even the most eager managers *could not* function as a business. For, regardless of the treatment accorded the operation *after* it is established, the *initial* launching of the firm is made with government money, and therefore by coercive levy. A fatally arbitrary element has been "built into" the very vitals of the enterprise. Furthermore, future decisions on expenditures will be made out of tax funds and will therefore be subject to the same flaw. The ease of obtaining money will inherently distort the operations of government enterprise. Moreover, suppose that the government "invests" in an enterprise E. Either the free market, left alone, would also have invested in this selfsame enterprise, or it would not. If it would have, then the economy suffers, at the very least, from the "take" going to the intermediary bureaucracy. If not, and this is almost certain, then it follows immediately that the expenditure on E is a distortion of private utility on the market—that some other expenditure would have brought greater monetary returns. It follows once again that a government enterprise cannot duplicate the conditions of private business.

In addition, the establishment of government enterprise creates an "unfair" competitive advantage over private firms, for at least part of its capital was gained by coercion rather than service. It is clear that government, with its subsidization, can drive a private business out of the field. Private investment in the same industry will be greatly restricted, since future investors will anticipate losses at the hands of privileged governmental competitors. Moreover, since all services compete for the consumer's dollar, all private firms and all private investment will to some degree be affected and hampered. And when a new government enterprise begins, it generates fears in other industries that they will be next, that they will either be confiscated or forced to compete with government-subsidized enterprises. This fear tends to repress productive investment further and thus lower the general standard of living still more.

Another argument, used quite correctly by "leftist" proponents of government ownership, is this: If business operation is so desirable, why take such a tortuous route? Why not scrap government ownership and turn the whole operation over to private business enterprise? Why go to such elaborate lengths to try to imitate the apparent ideal (private ownership) when the ideal may be pursued directly? The call for business principles in government, therefore, makes little sense, even if that call could be successful.

Many "criteria" have been offered by writers as guides for the pricing of government services. One criterion supports pricing according to "marginal cost." As we have indicated above, however, this is hardly a criterion at all and rests on classical fallacies of price determination by costs. "Marginal" varies according to the period of time surveyed. And costs are not in fact static but flexible; they change according to prices and hence cannot be used as a guide to the setting of prices. Moreover, prices equal average costs only in final equilibrium, and equilibrium cannot be regarded as an ideal for the real world. The market only *tends toward* this goal. Finally, costs of government operation will be higher than for similar operations on the free market.[63]

Government enterprise will not only hamper and repress private investment and entrepreneurship in the same industry and in industries throughout the economy; it will also disrupt the entire labor market. For the government (*a*) will decrease production and living standards in the society by siphoning off potentially productive labor to the bureaucracy; (*b*) using confiscated funds, it will be able to pay more than the market rate for labor and hence set up a clamor by government job-seekers for an expansion of the unproductive bureaucratic machine; and (*c*) the government's high tax-supported wages may well mislead workers into believing that this reflects the market wage in private industry, thus causing unwanted unemployment.

The inefficiencies of government operation are compounded by several other factors. As we have seen, a government enterprise competing in an industry can usually drive out private owners, since the government can subsidize itself in many ways and supply itself with unlimited funds when desired. In cases where it cannot compete even under these conditions, it can arrogate to itself a compulsory monopoly, driving out competitors by force. This was done in the United States in the case of the post office.[64] When the government thus grants itself a monopoly, it may go to the other extreme from free service; it may charge a monopoly price. Charging a monopoly price—now identifiably different from a free-market price—distorts resources again and creates an artificial scarcity of the particular good. It also permits an enormously lowered quality of service. A governmental monopoly need not worry that customers may go elsewhere or that inefficiency may mean its demise.[65] It is particularly absurd to call for "business principles" where a government enterprise functions as a monopoly. Periodically, for example, there are demands that the post office be put on a "business basis" and end its deficit, which must be paid by the taxpayers. But ending the deficit of an inherently and necessarily inefficient government operation does not mean going on a business basis. To cover costs, the price must be raised high enough to achieve a monopoly price and so camouflage and compensate for the government's inefficiencies. A monopoly price will levy an excessive burden on the users of the postal service, especially since the monopoly is compulsory. On the other hand, we have seen that even monopolists must abide by the consumers' demand schedule. If this demand schedule is elastic enough, it may well happen that a monopoly price will reduce revenue so much or cut down so much on its increase that a higher price will *increase* deficits rather than reduce them. An outstanding example has been the New York City subway system in recent years.[66]

E. CENTERS OF CALCULATIONAL CHAOS

We have seen in chapter 10 above that one cartel or one firm could not own all the means of production in the economy, because it could not calculate prices and allocate factors in a rational manner. And we have seen that this is the reason why State socialism could also not plan or allocate rationally. We further noted that two or more stages could not be totally integrated vertically on the market—for total integration would eliminate a whole segment of the market and establish an island of calculational and allocational chaos, an island that would preclude optimal planning for profits and maximum satisfaction for the consumers.

In the case of simple government ownership, still another extension of this thesis becomes evident. For *each* governmental firm introduces its *own* island of chaos into the economy; *there is no need to wait for full socialism for chaos to begin its work.* No government enterprise can ever determine prices or costs or allocate factors or funds in a rational, welfare-maximizing manner. No government enterprise could be established on a "business basis" even if the desire were present. Thus, any governmental operation injects a point of chaos into the economy; and since all markets are interconnected in the economy, every governmental activity disrupts and distorts pricing, the allocation of factors, consumption/investment ratios, etc. Every government enterprise not only lowers the social utilities of the consumers by forcing the allocation of funds to other ends than those desired by the public; it lowers the utility of everyone (including the utilities of some government officials) by distorting the market and spreading calculational chaos. The greater the extent of government ownership, of course, the more powerful will this impact become.

F. CONFLICT AND THE COMMAND POSTS

Aside from its purely economic consequences, government ownership has another kind of impact on society; it necessarily substitutes conflict for the harmony of the free market. Since government service means service by one set of decision-makers, it comes to mean uniform service. The desires of all those forced, directly or indirectly, to pay for the government service cannot be satisfied. Only some forms of the service can or will be produced by the government agency. As a result, government enterprise creates enormous caste conflicts among the citizens, each of whom has different ideas on the best form of service. In the final result, government enterprise can hardly fail to substitute its own values, or the values of one set of customers, for the values of all others. Artificially standardized services of poorer quality—fit to governmental taste or convenience—will hold sway, in contrast to the diversified services of higher quality which the free market supplies to fit the tastes of a multitude of individuals.

In recent years government schools in America have furnished a striking example of such problems and conflicts. Some parents prefer racially segregated schools; others prefer integrated education. Some parents want their children taught socialism; others want antisocialist teaching in the schools. There is no way that the government can resolve these conflicts. It can only impose the will of one group by coercion and leave the others dissatisfied and unhappy. Whichever type of school is chosen, some groups of parents will suffer. On the other hand, there is no such conflict on the free market, which provides any type of service demanded. On the market, those who want segregated or integrated, prosocialist or individualist, schools can have their wants satisfied. It is obvious, therefore, that governmental, as opposed to private, provision of services, lowers the standard of living of much of the population.

The degrees of government ownership in the economy vary from one country to another, but in *all* countries the State has made sure that it owns and monopolizes the vital nerve centers, the command posts of the society. It has acquired compulsory monopoly ownership over these command posts, and it has always asserted, without proof, that private ownership and enterprise in these fields is simply and a priori impossible.

Such vital command posts are defense, money (the mint and, nowadays, note issue), rivers and coastal seas, streets and highways, land generally (the "public domain" and the power of "eminent domain"), and the post office. The defense function is particularly vital to the State's existence, for on its virtual monopoly of force depends its ability to extract taxes from its citizens. Another critical command post held, though not always monopolized by, the State is education. For government schooling permits the influencing of the youthful mind to accept the virtues of the government under which it lives and of the principle of government intervention. Conservatives who often attack "socialistic" teaching in government schools are particularly wide of the mark, for the very fact that a government school exists and is therefore presumed to be good teaches its little charges the virtues of government ownership by example. And if government ownership is good and even preferable in schooling, why not for other educational media, e.g., newspapers—or for other important social services?

Even where the government does not have a compulsory monopoly of schooling, it approaches this ideal by compelling attendance of all children at either a government school or a private school approved by the government. Compulsory attendance brings into the schools those who do not desire or cannot benefit from schooling and forces them out of such competing fields as leisure and business employment.

G. THE FALLACIES OF "PUBLIC" OWNERSHIP

Finally, government ownership is often referred to as "public" ownership (the "public domain," "public" schools, the "public sector"). The implication is that when government owns anything, every member of the public owns equal shares of that property. But we have seen that the important feature of ownership is not legal formality but actual rule, and under government ownership it is the government officialdom that controls and directs, and therefore "owns," the property. Any member of the "public" who thinks he owns the property may test this theory by trying to appropriate for his own *individual* use his aliquot part of government property.[67, 68]

While rulers of government own "public" property, their ownership is not secure in the long run, since they may always be defeated in an election or deposed. Hence government officials will tend to regard themselves as only transitory owners of "public" resources. While a private owner, secure in his property and its capital value, may plan the use of his resource over a long period of time in the future, the government official must exploit "his" property as quickly as he can, since he has no security of tenure. And even the most securely entrenched civil servant must concentrate on present use, because government officials cannot usually sell the capitalized value of their property, as private owners can. In short, except in the case of the "private property" of a hereditary monarch, government officials own the current *use* of resources, but not their capital value. But if a resource itself cannot be owned, but only its current use, there will rapidly ensue an uneconomic exhaustion of the resource, since it will be to no one's benefit to conserve it over a period of time, and yet to each owner's advantage to use it up quickly. It is particularly curious, then, that almost all writers parrot the notion that private owners, possessing time preference, must take the "short view" in using their resources, while only government officials are properly equipped to exercise the "long view." The truth is precisely the reverse. The private individual, secure in his capital ownership, can afford to take the long view because of his interest in maintaining the capital value of his resource. It is the government official who must take and run, who must exploit the property quickly while he is still in command.[69]

H. SOCIAL SECURITY

Before ending our discussion of specific governmental activities, we may note in passing a curiously popular form of government expenditure: "social security." Social security confiscates the income of wage earners, and then, most people presume, it invests the money more wisely than they could themselves, later paying out the money to the former wage earners in their old age. Considered as "social insurance," this is a typical example of government enterprise: there is no relation between premiums and benefits, the latter changing yearly under the impact of political pressures. On the free market, anyone who wishes may invest in an insurance annuity or in stocks or real estate. Compelling everyone to transfer his funds to the government forces him to lose utility. Thus, even on its face, it is difficult to understand the great popularity of the social security program. But the true nature of the program differs greatly from the popular image. For the government does *not* invest the funds it takes in taxes; it simply spends them, giving itself its own bonds which must later be cashed when the benefits fall due. The cash, of course, can be obtained only by *further* taxation. Thus the public must pay *twice* for one payment of social security. The program is essentially one of making more palatable a general taxation of lower-income, wage-earning groups.

I. SOCIALISM AND CENTRAL PLANNING

When government ownership or control extends to the entire productive system, then the economic system is called *socialism*. Socialism, in short, is the violent abolition of the market, the compulsory monopolization of the entire productive sphere by the State. There are two and only two ways that any economy can be organized. One is by freedom and voluntary choice—the way of the market. The other is by force and dictation—the way of the State. To those ignorant of economics, it may seem that the way of the market is only anarchic confusion and chaos, while the way of the State constitutes genuine organization and "central planning." On the contrary, we have seen in this book what an amazing and flexible mechanism the market is for satisfying the wants of all individuals. State operation or intervention is, on the other hand, far less efficient and creates many disruptive and cumulative problems of its own. Moreover, a socialist State, deprived of the real market and its determination of prices for producers' goods, *cannot* calculate and can therefore run a productive system only in chaotic fashion. The economics of socialism—a whole branch of economics of its own—can only be touched upon here; suffice it to say that Mises' demonstration of the impossibility of economic calculation under socialism has never been successfully refuted.[70]

Here we might mention just a few points on the economics of socialism. One, since ownership is, *de facto,* the control of a resource, a Nazi, Fascist or other "centrally planned" system is as much "socialism" as a Communist regime that officially nationalizes property.[71] Secondly, the extent of socialism in the present-day world is at the same time *under*estimated in countries such as the United States and *over*estimated in Soviet Russia. It is underestimated because the expansion of government *lending* to private enterprise in the United States has been generally neglected, and we have seen that the lender, regardless of his legal status, is also an entrepreneur and part owner. The extent of socialism is overestimated because most writers ignore the fact that Russia, socialist as she is, cannot have full socialism as long as she can still refer to the relatively free markets existing in other parts of the world. In short, a single socialist country or bloc of countries, while inevitably experiencing enormous difficulties and wastes in planning, can still buy and sell and refer to the world market and can therefore at least vaguely approximate some sort of rational pricing of producers' goods by extrapolating from that market.[72] The well-known wastes and errors of this partial socialist planning are negligible compared to what would be experienced under the *total* calculational chaos of a world socialist state.

Another neglected factor diminishing the extent of planning in socialist countries is "black market" activities, particularly in commodities (candy, cigarettes, drugs, stockings, etc.) that are easy to conceal. Even in bulkier commodities, falsification of records and extensive graft may bring some sort of limited market—a market violating all the socialist plans—into existence.[73]

Moreover, it should be noted that a centrally "planned" economy is a centrally *prohibited* economy. The concept of "social engineering" is a deceptive metaphor, since in the *social* realm, it is largely *people* who are being planned, rather than the inanimate machinery of engineering blueprints. And since every individual is by nature, if not always by law, a self-owner and self-starter—i.e., a self-energizer, this means that central orders, backed up, as they must be under socialism, by force and violence, effectively *prohibit* all the individuals from doing what they want most or what they believe themselves to be best fitted to do. If the Central Planning Board, in short, orders X and Y to Pinsk to work as truck drivers, this means that X and Y are effectively and coercively *prohibited* from doing what they would have done voluntarily: perhaps X would have gone to Leningrad to be a longshoreman, and perhaps Y would have stayed around to tinker in his workshop and invent a new and highly useful device.

The latter point brings us to another grave defect of central planning: inventions, innovations, technological developments, by their very nature, by definition, cannot be predicted in advance and therefore cannot be centrally and bureaucratically *planned*. Not only does no one know *what* will be invented *when;* no one knows *who* will do the inventing. Clearly, a centrally prohibited economy, irrational and inefficient enough for *given* ends and given means and techniques at any point of time, is all the more incompetent if a flow of inventions and new developments are desired in society. Bureaucracy, incompetent enough to plan a stationary system, is vastly more incompetent at planning a progressive one.[74, 75]

10. *Growth, Affluence, and Government*

A. THE PROBLEM OF GROWTH

In recent years economists and journalists alike have been heavily emphasizing a new concept—"growth," and much economic writing is engaged in a "numbers game" on what percentage, or "rate of growth," "we" should have next year or in the next decade. The discussion is replete with comparisons of the higher rate of country X which "we" must hurriedly counter, etc. Amidst all the interest in growth, there are many grave problems which have hardly been touched upon. First and foremost is the simple query: "What is so good about growth?" The economists, discoursing scientifically about growth, have illegitimately smuggled an ethical judgment into their science—an ethical judgment that remains unanalyzed, as if it were self-evident. But why should growth be the highest value for which we can strive? What is the ethical justification? There is no doubt about the fact that growth, taken over as another dubious metaphor from biology, "sounds" good to most people, but this hardly constitutes an adequate ethical analysis. Many things are considered as good, but on the free market every man must choose between different quantities of them and the price for those forgone. Similarly, growth, as we shall presently see, must be balanced and weighed against competing values. Given due consideration, growth would be considered by few people as the *only* absolute value. If it were, why stop at 5% or 8% growth per year? Why not 50%?

It is completely illegitimate for the economist *qua* economist simply to endorse growth. What he can do is to contrast what growth means in various social conditions. In a free market, for example, every person chooses how much future growth he wants as compared to *present consumption*. "Growth," i.e., a rise in future living standards, can be achieved, as we have implicitly made clear throughout this volume, only in a few definable ways. Either more and better resources can be found, or more and better people can be born, or technology improved, or the capital-goods structure must be lengthened and capital multiplied. In practice, since resources need capital to find and develop them, since technological improvement can be applied to production only via capital investment, since entrepreneurial skills act only through investments, and since an increased labor supply is relatively independent of short-run economic considerations and can backfire in Malthusian fashion by lowering per capita output, the *only* viable way to growth is through increased saving and investment. On the free market, each individual decides how much he wants to save—to increase his future living standards —as against how much he wants to consume in the present. The net resultant of all these voluntary individual decisions is the nation's or world's rate of capital investment. The total is a reflection of the voluntary, free decisions of every consumer, of every person. The economist, therefore, has no business endorsing "growth" as an end; if he does so, he is injecting an unscientific, arbitrary value judgment, especially if he does not present an ethical theory in justification. He should simply say that, in a free market, everyone gets as much "growth" as he chooses to obtain; and that, furthermore, the people as a whole benefit greatly from the voluntary savings of others who do the saving and investing.

What happens if the government decides, either by subsidies or by direct government ownership, to try to spur the social rate of growth? Then, the economist should point out, the entire situation changes. No longer does each person elect to "grow" as he thinks best. Now, with compulsory saving and investing, investment can come only *at the expense* of the *forced* saving of some individuals. In short, if A, B, and C "grow" because their standard of living rises from compulsory investment, they do so at the expense of D, E, and F, the ones who were compelled to save. No longer can we say that the social standard of living, the standard of living of each active person, rises; under compulsory growth, some people—the coerced savers—clearly and demonstrably *lose. They* "grow" backward. Here is one reason why government intervention can *never* raise society's rate of "growth." For when individuals act freely on the market, every one of their actions benefits everyone, and so growth is truly "social," i.e., participated in by everyone in the society. But when government acts to force growth, it is only *some* who grow at the expense of the *retrogression* of others. The *wertfrei* economist is therefore not permitted to say that "society" grows at all.

Growth, therefore, is demonstrably not the single absolute value for anyone. People on the market all weigh growth *against* present consumption, just as they weigh work against leisure, and all goods against one another. If we fully realize that there is no such existent entity as "society" apart from individuals, it becomes clear that "society" cannot grow at the expense of imposing losses on some or most of its members. Suppose, for example, that a community exists where the bulk of the population do not *want* to "grow"; they would rather not work very hard or save very much; instead they would loll under the trees, pick berries, and play games. To advocate the government's coming on the scene and forcing these people to work and save, in order to "grow" at some time in the future, means to advocate the compulsory lowering of the standard of living of the bulk of the populace in the present and near future. Any sort of achieved production, under this scheme, however great, would not be "growth" for society; instead it would be retrogression, not only for some but for most people. An economist, therefore, cannot *scientifically* advocate compulsory growth, for what he is really doing is attempting to impose his own ethical views (e.g., more hard work and saving is better than more leisure and berries) on the *other* members of society by force. These members greatly lose utility as a result.

Furthermore, it must be emphasized again that in cases of coerced saving the *saver* reaps none of the benefit of his sacrifice, which is instead reaped by government officials or other beneficiaries. This contrasts to the free market, where people save and invest precisely because *they* will reap some tangible and desired rewards.

In a regime of coerced growth, then, "society" cannot grow, and conditions are totally different from those of the free market. Indeed, what we have is a form of the "free rider" argument against the free market and for government; here the various "free riders" band together to force *other* people to be thrifty so that the former can benefit.[76]

Even if we set these problems aside, it is doubtful how much the coercing free riders can benefit from these measures. Many considerations treated above now come into play. In the first place, the growth and success of the compulsory free riders discourage production and shift more and more people and energy from production to the exploitation of production, i.e., to compulsory free riding. Secondly, we have seen that if government itself does the "investing" out of the confiscated savings of others, the result, for many reasons, is not genuine investment, but *waste assets*. The capital built out of coerced savings, then, instead of benefiting the consumers, is largely wasted and dissipated. Even if government uses the money to subsidize various private investments, the results are still grave; for these investments, being uneconomic in relation to genuine consumers' demand and profit-and-loss signals on the market, will constitute *mal*investment. Once the government removed its subsidies and let all capital compete equally in serving consumers, it is doubtful how much of this investment would survive.

Although we have no intention of dealing here to any extent with an empirical problem like Soviet economic growth, we may illustrate our analysis by noting the hullabaloo that has been raised in recent years over the supposedly enormous rate of Soviet growth. Curiously, one finds that the "growth" seems to be taking place almost exclusively in capital goods, such as iron and steel, hydroelectric dams, etc., whereas little or none of this growth ever seems to filter down to the standard of living of the average Soviet consumer. The consumer's standard of living, however, is the be-all and end-all of the entire production process. *Production* makes no sense whatever except as a means to *consumption.* Investment in capital goods means nothing except as a *necessary way station to increased consumption.* When capital investment takes place in the free market, it deprives no one of consumption goods; for those save who voluntarily choose investment over some present consumption. No one is required to sacrifice present consumption who does not wish to do so. As a result, the standard of living of everyone rises continually and smoothly as investment increases. But a Soviet or other system of compulsory investment *lowers* the standard of living of almost everyone, certainly in the near future. And there is every indication that the "pie-in-the-sky" day when living standards finally rise almost never arrives. In short, government "investment," as we have noted above, turns out to be a peculiar form of wasteful "consumption" by government officials.[77]

There is another consideration that reinforces our conclusion. Professor Lachmann has been diligently reminding us of what economists generally forget: that "capital" is not just a homogeneous blob that can be added to or subtracted from. Capital is an intricate, delicate, interweaving *structure* of capital goods. All of the delicate strands of this structure have to fit, and fit precisely, or else malinvestment occurs. The free market is almost an automatic mechanism for such fitting; and we have seen throughout this volume how the free market, with its price system and profit-and-loss criteria, adjusts the output and variety of the different strands of production, preventing any one from getting long out of alignment.[78] But under socialism or with massive government investment, there is no such mechanism for fitting and harmonizing. Deprived of a free price system and profit-and-loss criteria, the government can only blunder along, blindly "investing" without being able to invest properly in the right fields, the right products, or the right places. A beautiful subway will be built, but no wheels will be available for the trains; a giant dam, but no copper for transmission lines, etc. These sudden surpluses and shortages, so characteristic of government planning, are the result of massive malinvestment by the government.[79]

The current controversy over growth, is, in a sense, the result of a critical error made by "right-wing" economists in their continuing debate with their "left-wing" opponents. Instead of emphasizing freedom and free choice as their highest *political* end, the rightist economists have stressed the importance of freedom *as a utilitarian means* of encouraging saving, investment, and therefore, economic growth. We have seen above that conservative opponents of the progressive income tax have often fallen into the trap of treating saving and investment as somehow a greater and higher good than consumption, and therefore of implicitly criticizing the free market's saving/consumption ratio. Here we have another example of the same lapse into an implicit, arbitrary criticism of the market. What the modern "leftist" proponents of compulsory growth have done is to use the venerable arguments of the conservatives as a boomerang against them, and to say, in effect, to their opponents: "Very well. You have been maintaining that saving and investment are of critical importance because they lead to growth and economic progress. Fine; but, as you yourselves implicitly grant, the free market's proportion of saving and investment is really too slow. Why then rely upon it? Why not speed up growth by using government to coerce even more saving and investment, to speed up capital further?" It is evident that conservatives cannot counter by reiterating their familiar arguments. The proper comment here is the analysis we have been expounding—in short: (*a*) By what right do you maintain that people *should* grow faster than they voluntarily wish to grow? (*b*) Compulsory growth will not benefit the whole of society as will freely chosen growth, and it is therefore not "social growth"; some will gain—and gain at some distant date—at the expense of the retrogression of others. (*c*) Government investment or subsidized investment is either malinvestment or not investment at all, but simply waste assets or "consumption" of waste for the prestige of government officials.

What, in point of fact, *is* economic "growth"? Any proper definition must surely encompass an increase of economic means available for the satisfaction of people's ends—in short, increased satisfactions of people's wants, or as P. T. Bauer has put it, "an increase in the range of effective alternatives open to people." On such a definition, it is clear that compulsory saving, with its imposed losses and restrictions on people's effective choices, cannot spur economic growth; and also that government "investment," with its neglect of voluntary private consumption as its goal, can hardly be said to add to people's alternatives. Quite the contrary.[80]

Finally, the very term "growth" is an illegitimate import of a metaphor from biology into human action.[81] "Growth" and "rate of growth" connote some sort of automatic necessity or inevitability and have for many people a value-loaded connotation of something self-evidently desirable.[82]

Concomitantly with the hubbub about growth there has developed an enormous literature about the "economics of underdeveloped countries." We can here note only a few considerations. First, contrary to a widespread impression, "neoclassical" economics applies just as fully to underdeveloped as to any other countries. In fact, as P. T. Bauer has often stressed, the economic discipline is in some ways sharper in less developed countries because of the extra option that many people have of reverting from a monetary to a barter economy. An underdeveloped country can grow only in the same ways as a more advanced country: largely via capital investment. The economic laws which we have adumbrated throughout this volume are independent of the specific content of any community's or nation's economy, and therefore independent of its level of development. Secondly, underdeveloped countries are especially prone to the wasteful, dramatic, prestigious government "investment" in such projects as steel mills or dams, as contrasted with economic, but undramatic, private investment in improved agricultural tools.[83, 84] Thirdly, the term "underdeveloped" is definitely value-loaded to imply that certain countries are "too little" developed below some sort of imposed standard. As Wiggins and Schoeck point out, "undeveloped" would be a more objective term.[85]

Because of its spectacular burst of popularity, something must here be said of the recent "stages of economic growth" doctrine of Professor Rostow. Highly recommended as "the answer to Marx" (as if Marx had never been "answered" before), Rostow divines five stages of economic growth through which each modern nation passes; these center around the "take-off" and include "preconditions" of take-off, drive from take-off to "maturity," and, as the final stage, "high mass-consumption."[86] In addition to committing the common fallacy of assuming some sort of automatic rate of "growth," Rostow adds many others of his own, among which are the following: (*a*) the resumption of the futile modern search for nonexistent "laws of history"; (*b*) the discovery of such "laws" by way of that hoary fallacy of late nineteenth-century German thought, "stages of history," with each arbitrary stage somehow destined to evolve automatically into the next; (*c*) the undue stress—here, as in other ways, closer to Marx than most critics realize—on sheer *technology* as the *fons et origo* of economic development; (*d*) the deliberate mixing of government and private firms as equally capable of "entrepreneurship"; and (*e*) reliance on the fallacious concept of "social overhead capital," which must be mainly supplied by the government before "take-off" is achieved. Actually, as we have seen, there are not different stages of economy, each subject to its own laws, but one single economics which applies to any level of development and explains any degree of "growth." Rostow's final stage of "high mass-consumption" is particularly open to question. What was more characteristic of the early, "take-off" stage of the Industrial Revolution in Britain than precisely the shift of production toward mass consumption of cheap, factory-made textile goods? Mass consumption was a feature of the Industrial Revolution from the beginning; it is not, contrary to a popular myth, some sort of new condition of the 1950's.[87, 88]

B. PROFESSOR GALBRAITH AND THE SIN OF AFFLUENCE

In the early part of the twentieth century, the main indictment of the capitalist system by its intellectual critics was the alleged pervasiveness of "monopoly." In the 1930's, mass unemployment and poverty ("one third of a nation") came to the fore.

At the present time growing abundance and prosperity have greatly dimmed the poverty and unemployment theme, and the only serious "monopoly" seems to be that of labor unionism. Let it not be thought, however, that criticism of capitalism has died. Two seemingly contradictory charges are now rife: (*a*) that capitalism is not "growing" fast enough, and (*b*) that the trouble with capitalism is that it makes us too "affluent." Excess wealth has suddenly replaced poverty as the tragic flaw of capitalism.[89] At first sight, these latter charges appear contradictory, for capitalism is at one and the same time accused of producing too many goods, and yet of not increasing its production of goods fast enough. The contradiction seems especially glaring when the same critic presses both lines of attack, as is true of the leading critic of the sin of affluence, Professor Galbraith.[90] But, as the *Wall Street Journal* has aptly pointed out, this is not really a contradiction at all; for the excessive affluence is all in the "private sector," the goods enjoyed by the consumers; the deficiency, or "starvation," is in the "public sector," which needs further growth.[91]

Although *The Affluent Society* is replete with fallacies, backed by dogmatic assertions and time-honored rhetorical devices in place of reasoned argument,[92] the book warrants some consideration here in view of its enormous popularity.

As in the case of most "economists" who attack economic science, Professor Galbraith is an historicist, who believes that economic theory, instead of being grounded on the eternal facts of human nature, is somehow relative to different historical epochs. "Conventional" economic theory, he asserts, was true for the eras before the present, which were times of "poverty"; now, however, we have vaulted from a centuries-long state of poverty into an age of "affluence," and for such an age, a completely new economic theory is needed. Galbraith also makes the philosophical error of believing that ideas are essentially "refuted by events"; on the contrary, in human action, as contrasted with the natural sciences, ideas can be refuted only by *other* ideas; events themselves are complex resultants which need to be interpreted by correct ideas.

One of Galbraith's gravest flaws is the arbitrariness of the categories, which pervade his work, of "poverty" and "affluence." Nowhere does he define what he means by these terms, and therefore nowhere does he lay down standards by which we can know, even in theory, when we have passed the magic borderland between "poverty" and "affluence" that requires an entirely new economic theory to come into being. The present book and most other economic works make it evident that economic science is *not* dependent on some arbitrary level of wealth; the basic praxeological laws are true of all men at all times, and the catallactic laws of the exchange economy are true whenever and wherever exchanges are made.

Galbraith makes much of his supposed discovery, suppressed by other economists, that the marginal utility of goods declines as one's income increases and that therefore a man's final $1,000 is not worth nearly as much to him as his first—the margin of subsistence. But this knowledge is familiar to most economists, and this book, for example, has included it. The marginal utility of goods certainly declines as our income rises; but the very fact that people continue to work for the final $1,000 and work for more money when the opportunity is available, demonstrates conclusively that the marginal utility of goods is still greater than the marginal disutility of leisure forgone. Galbraith's hidden fallacy is a *quantitative* assumption: from the mere fact that the marginal utility of goods *falls* as one's income and wealth rise, Galbraith has somehow concluded that it has *already* fallen to *virtually, or really, zero*. The fact of decline, however, tells us nothing whatever about the *degree* of this decline, which Galbraith arbitrarily assumes has been almost total. All economists, even the most "conventional," know that as incomes have risen in the modern world, workers have chosen to take more and more of that income in the form of leisure. And this should be proof enough that economists have long been familiar with the supposedly suppressed truth that the marginal utility of goods in general tends to decline as their supply increases. But, Galbraith retorts, economists admit that leisure is a consumers' good, but *not* that other goods decline in value as their supply increases.

Yet this is surely an erroneous contention; what economists know is that, as civilization expands the supply of goods, the marginal utility of goods declines *and* the marginal utility of leisure forgone (the opportunity cost of labor) increases, so that more and more real income will be "taken" in the form of leisure. There is nothing at all startling, subversive, or revolutionary about this familiar fact.

According to Galbraith, economists wilfully ignore the spectre of the satiation of wants. Yet they do so quite properly, because when wants—or rather, wants for exchangeable goods—are truly satiated, we shall all know it soon enough; for, at that point, everyone will cease working, will cease trying to transform land resources into final consumers' goods. There will be no need to continue producing, because all needs for consumers' goods will have been supplied—or at least all those which can be produced and exchanged. At this point, everyone will stop work, the market economy—indeed, *all economy*—will come to an end, means will no longer be scarce in relation to ends, and everyone will bask in paradise. I think it self-evident that this time has not yet arrived and shows no signs of arriving; if it some day should arrive, it will be greeted by economists, as by most other people, not with curses, but with rejoicing. Despite their venerable reputation as practitioners of a "dismal science," economists have no vested interests, psychological or otherwise, in scarcity.

But, in the meanwhile, this is still a world of scarcity; scarce means have to be applied to alternate ends; labor is still necessary. People still work for their final $1,000 of income and would be happy to accept another $1,000 should it be offered. We would venture another prediction: An informal poll taken among the people, asking whether they would accept, or know what to do with, an extra few thousand dollars of annual (real) income, would find almost no one who would refuse the offer because of excessive affluence or satiety—or for any other reason. Few would be at a loss about what to do with their increased wealth. Professor Galbraith, of course, has an answer to all this. These wants, he says, are not real or genuine ones; they have been "created" in the populace by advertisers, and their wicked clients, the producing businessmen. The very fact of production, through such advertising, "creates" the supposed wants that it supplies.

Galbraith's entire theory of excess affluence rests on this flimsy assertion that consumer wants are artificially created by business itself. It is an allegation backed only by repetitious assertion and by no evidence whatever—except perhaps for Galbraith's obvious personal dislike for detergents and tailfins. What is more, the attack on wicked advertising as creating wants and degrading the consumer is surely the most conventional of the conventional wisdom in the anticapitalist's arsenal.[93]

There are many fallacies in Galbraith's conventional attack on advertising. In the first place, it is not true that advertising "creates" wants or demands on the part of the consumers. It certainly tries to persuade consumers to buy the product; but it cannot *create* wants or demands, because each person must himself *adopt* the ideas and values on which he acts—whether these ideas or values are sound or unsound. Galbraith here assumes a naive form of determinism—of advertising upon the consumers, and, like all determinists, he leaves an implicit escape clause from the determination for people like himself, who are, unaccountably, *not* determined by advertising. If there is determinism by advertising, how can some people be determined to rush out and buy the product, while Professor Galbraith is free to resist the advertisements with indignation and to write a book denouncing the advertising? [94]

Secondly, Galbraith gives us no standard to decide which wants are so "created" and which are legitimate. By his stress on poverty, one might think that all wants above the subsistence level are false wants created by advertising. Of course, he supplies no evidence for this view. But, as we shall see further below, this is hardly consistent with his views on public or governmentally induced wants.

Thirdly, Galbraith fails to distinguish between fulfilling a given want in a better way and inducing new wants. Unless we are to take the extreme and unsupported view that *all* wants above the subsistence line are "created," we must note the rather odd behavior attributed to businessmen by Galbraith's assumptions.

Why *should* businessmen go to the expense, bother, and uncertainty of trying to create *new* wants, when they could far more easily look for better or cheaper ways of fulfilling wants that consumers *already* have? If consumers, for example, already have a discernible and discoverable want for a "no-rub cleanser," it is surely easier and less costly to produce and then advertise a no-rub cleanser than it would be to create some completely new want—say for *blue* cleansers in particular—and then work very hard and spend a great deal of money on advertising campaigns to try to convince people that they *need* blue cleansers because blue "is the color of the sky" or for some other artificial reason.[95] In short, the Galbraithian view of the business and marketing system makes little or no sense. Rather than go to the expensive, uncertain, and, at bottom, needless, task of trying to find a new want for consumers, business will tend to satisfy those wants that consumers already have, or that they are pretty sure consumers would have if the product were available. Advertising is then used as a means of (*a*) conveying information to the consumers that the product is now available and telling them what the product will do; and (*b*) specifically, trying to convince the consumers that this product *will* satisfy their given want—e.g., *will* be a no-rub cleanser.

Indeed, our view is the only one that makes sense of the increasingly large quantities of money spent by business on marketing research. Why bother investigating in detail *what* consumers really want, if all one need do is to *create* the wants for them by advertising? If, in fact, production *really* created its own demand through advertising, as Galbraith maintains, business would never again have to worry about losses or bankruptcy or a failure to sell automatically any good that it may arbitrarily choose to produce. Certainly there would be no need for marketing research or for any wondering about what consumers will buy. This image of the world is precisely the reverse of what is occurring. Indeed, precisely because people's standards of living are moving ever farther past the subsistence line, businessmen are worrying ever more intensely about what consumers want and what they will buy. It is because the range of goods available to the consumers is expanding so much beyond simple staples needed for subsistence, in quantity, quality, and breadth of product substitutes, that businessmen must compete as never before in paying court to the consumer, in trying to obtain his attention: in short, in advertising. Increasing advertising is a function of the increasingly effective range of competition for the consumer's favor.[96]

Not only will businessmen tend to produce for and satisfy what they believe are the given wants of consumers, but the consumers, in contrast to voters, as we have seen above, have a direct market test for every piece of advertising that they confront. If they buy the cleanser and find that much rubbing is still required, the product will soon fade into oblivion. Thus, any advertising claims for *market* products can be and are quickly and readily tested by the consumers. Confronted with these facts, Galbraith could only maintain that the aversion against rubbing was *itself* generated, in some mysterious and sinister fashion, by business advertising.[97]

Advertising is one of the areas in which Galbraith, curiously and in glaring self-contradiction, treats private business differently from governmental activities. Thus, while business is supposed to be "creating" consumer wants through advertising, thereby generating an artificial affluence, at the same time the neglected "public sector" is increasingly starved and poverty-stricken. Apparently, Galbraith has never heard of, or refuses to acknowledge the existence of, *governmental* propaganda. He makes no mention whatever of the hordes of press agents, publicists and propagandists working for government agencies, bombarding the taxpayers with propaganda which the latter have been *forced* to support. Since a considerable part of the propaganda is for ever-greater increases in the particular government bureau's activities, this means that G, the government officials, expropriate T, the bulk of the taxpayers, in order to hire more propagandists for G, to persuade the taxpayers to permit still more funds to be taken from them. And so forth. It is strange that, while waxing indignant over detergent and automobile commercials over television, Professor Galbraith has never had to endure the tedium of "public service commercials" beamed at him from the government. We may pass over the Washington conferences for influential private organizations that serve as "transmission belts" for government propaganda to the grassroots, the "inside briefings" that perform the same function, the vast quantities of printed matter subsidized by the taxpayer and issued by the government, etc.

Indeed, not only does Galbraith *not* consider government propaganda as artificially want-creating (and this is a realm, let us remember, where consumers *have no market test* of the product), but one of his major proposals is for a vast program of what he calls "investment in men," which turns out to be large-scale governmental "education" to uplift the wants and tastes of the citizenry. In short, Galbraith wants society's objective to be the deliberate expansion of the "New Class" (roughly, intellectuals, who are blithely assumed to be the only ones who really enjoy their work), "with its emphasis on education and its ultimate effect on intellectual, literary, cultural and artistic demands . . ." [98]

It seems evident that, while the free market and business are accused of artificially creating consumer wants, the shoe is precisely on Galbraith's own foot. It is *Galbraith* who is eager to curtail and suppress the consumers' freely chosen wants, and who is advocating a massive and coercive attempt by the government to create artificial wants, to "invest in men" by "educating" them to redirect their wants into those refined and artistic channels of which Professor Galbraith is so fond. Everyone will have to give up his tailfins so that all may be compelled to . . . read books (like *The Affluent Society,* for example?).

There are other grave and fundamental fallacies in Galbraith's approach to government. In particular, after making much ado over the fact that, with poverty conquered, the marginal utility of further goods is lower, he finds that everything somehow works in reverse for "governmental needs." Governmental needs, in some mystical way, are exempt from this law of diminishing marginal wants; instead, *mirabile dictu,* governmental needs *increase* in urgency as society becomes more affluent. From this flagrant and unresolved contradiction, Galbraith leaps to the conclusion that government must compel the massive shifting of resources from superfluous private, to starved public, needs. But on the basis of diminishing marginal utility alone, there is no case for such a shift, since *all* wants at a higher real income are of lower utility than the wants of the poverty-stricken. And when we realize that if we talk about "created" wants at all, governmental propaganda is vastly more likely to "create" wants than is business, a case, even in Galbraith's own terms, can be made for just the reverse: for a shift from the governmental to the private sector. And, finally, Galbraith, in his lament for the starved and underprivileged public sector, somehow neglects to inform his readers that, whatever statistics are used, it is clear that, in the past half-century, government activity has increased far more than private. Government is absorbing and confiscating a far greater share of the national product than in earlier days. How much lower its "utility," and how much greater the case, in Galbraith's terms, for a shift *from* government *to* private activity!

Galbraith also airily assumes, in common with many other writers, that many governmental services are "collective goods" and therefore simply *cannot* be supplied by private enterprise. Without going further into the question of the desirability of private enterprise in these fields, one must note that Galbraith is quite wrong. Not only is his thesis simply a bald assertion, unsupported by facts, but, on the contrary, every single service generally assumed to be suppliable by government *alone* has been historically supplied by private enterprise. This includes such services as education, road building and maintenance, coinage, postal delivery, fire protection, police protection, judicial decisions, and military defense—all of which are often held to be self-evidently and necessarily within the exclusive province of government.[99]

There are many other important fallacies in Galbraith's book, but the central thesis of *The Affluent Society* has now been discussed. Thus, one of the reasons why Galbraith sees great danger in the present high consumption is that much is financed by consumer credit, which Galbraith considers, in the conventional manner, to be "inflationary" and to lead to instability and depression. Yet, as we shall see further, consumer credit that does not add to the money supply is *not* inflationary; it simply permits consumers to *redirect* the pattern of their spending so as to buy more of what they want and ascend higher in their value scales. In short, they may redirect spending from nondurable to durable goods. This is a *transfer* of spending power, not an inflationary rise. The device of consumer credit was a highly productive invention.

Predictably, Galbraith pours much of his scorn on the supply-and-demand explanation of inflation, and especially on the proper monetary explanation, which he terms "mystical." His view of depression is purely Keynesian and assumes that a depression is caused by a deficiency of aggregate demand. "Inflation" is an increase in prices, which he would combat *either* by reducing aggregate demand through high taxes *or* by selective price controls and the fixing, by compulsory arbitration, of important wages and prices. If the former route is chosen, Galbraith, as a Keynesian, believes that unemployment would ensue. But Galbraith is not really worried, for he would take the revolutionary step of separating income from production; production, it seems, is important only because it provides income. (We have seen that government activity has already effected a considerable separation.) He proposes a sliding scale of unemployment insurance provided by the government, to be greater in depression than in boom, the payment in depression rising *almost* to the general prevailing wage (for some reason, Galbraith would not go precisely as high, because of a lingering fear of some disincentive effect on the unemployed's finding jobs). He does not seem to realize that this is merely a way of aggravating and prolonging unemployment during a depression and indirectly subsidizing union wage scales above the market. There is no need to stress the author's other vagaries, such as his adoption of the conventional conservationist concern about using up precious resources—a position, of course, consistent with Galbraith's general attack on the private consumer.[100]

As we have indicated above, there *is* a problem of the "public sector"; scarcities and conflicts keep appearing in government services, and in these fields alone, e.g., juvenile delinquency, traffic jams, overcrowded schools, lack of parking space, etc. We have seen above that the single remedy that proponents of government activity can offer is for more funds to be channeled from private to public activity.[101] We have shown, however, that such scarcity and inefficiency are inherent in government operation of any activity. Instead of taking warning from the inefficiencies of government output, writers like Galbraith turn the blame from government onto the taxpayers and consumers, just as government water officials characteristically blame the *consumers* for water shortages. At no time does Galbraith so much as consider the possibility of mending an ailing public sector by *making that sector private.*

How would Galbraith *know* when his desired "social balance" was achieved? What criteria has he set to guide us in knowing *how much* shift there should be from private to public activity? The answer is, *none;* Galbraith cheerfully concedes that there is no way of finding the point of optimum balance: "No test can be applied, for none exists." But, after all, precise definitions, "precise equilibrium," are not important; for to Galbraith it is crystal "clear" that we must move now from private to public activity, and to a "considerable" extent. We shall know when we arrive, for the public sector will then bask in opulence. And to think that Galbraith accuses the perfectly sound and logical monetary theory of inflation of being "mystical" and "unrevealed magic"! [102]

Before leaving the question of affluence and the recent attack on consumption—the very goal of the entire economic system, let us note two stimulating contributions in recent years on hidden but important functions of luxury consumption, particularly by the "rich." F. A. Hayek has pointed out the important function of the luxury consumption of the rich, at any given time, in pioneering new ways of consumption, and thereby paving the way for later diffusion of such "consumption innovations" to the mass of the consumers.[103] And Bertrand de Jouvenel, stressing the fact that refined esthetic and cultural tastes are concentrated precisely in the more affluent members of society, also points out that these citizens are the ones who could freely and voluntarily give many gratuitous services to others, services which, because they are free, are not counted in the national income statistics.[104]

11. *Binary Intervention: Inflation and Business Cycles*

A. INFLATION AND CREDIT EXPANSION

In chapter 11, we depicted the workings of the monetary system of a purely free market. A free money market adopts specie, either gold or silver or both parallel, as the "standard" or *money proper*. Units of money are simply *units of weight* of the money-stuff. The total stock of the money commodity increases with new production (mining) and decreases from wear and tear and use in industrial employments. Generally, there will be a gradual secular rise in the money stock, with effects as analyzed above. The wealth of some people will increase and of others will decline, and no social usefulness will accrue from an increased supply of money—in its monetary use. However, an increased stock will raise the social standard of living and well-being by further satisfying *nonmonetary* demands for the monetary metal.

Intervention in this money market usually takes the form of issuing pseudo warehouse receipts as money-substitutes. As we saw in chapter 11, demand liabilities such as deposits or paper notes may come into use in a free market, but may equal only the actual value, or weight, of the specie deposited. The demand liabilities are then genuine warehouse receipts, or true money certificates, and they pass on the market as representatives of the actual money, i.e., as money-substitutes. Pseudo warehouse receipts are those issued in excess of the actual weight of specie on deposit. Naturally, their issue can be a very lucrative business. Looking like the genuine certificates, they serve also as money-substitutes, even though not covered by specie. They are fraudulent, because they promise to redeem in specie at face value, a promise that could not possibly be met were all the deposit-holders to ask for their own property at the same time. Only the complacency and ignorance of the public permit the situation to continue.[105]

Broadly, such intervention may be effected either by the government or by private individuals and firms in their role as "banks" or money-warehouses. The process of issuing pseudo warehouse receipts or, more exactly, *the process of issuing money beyond any increase in the stock of specie,* may be called *inflation.*[106] A contraction in the money supply outstanding over any period (aside from a possible net decrease in specie) may be called *deflation.* Clearly, *inflation* is the primary event and the primary purpose of monetary intervention. There can be no deflation without an inflation having occurred in some previous period of time. A priori, almost all intervention will be inflationary. For not only must all monetary intervention *begin* with inflation; the great gain to be derived from inflation comes from the issuer's putting new money into circulation. The profit is practically costless, because, while all other people must either sell goods and services and buy or mine gold, the government or the commercial banks are literally creating money out of thin air. They do not have to buy it. Any profit from the use of this magical money is clear gain to the issuers.

As happens when new specie enters the market, the issue of "uncovered" money-substitutes also has a diffusion effect: the first receivers of the new money gain the most, the next gain slightly less, etc., until the midpoint is reached, and then each receiver loses more and more as he waits for the new money. For the first individuals' selling prices soar while buying prices remain almost the same; but later, buying prices have risen while selling prices remain unchanged. A crucial circumstance, however, differentiates this from the case of increasing specie. The new paper or new demand deposits have no social function whatever; they do not demonstrably benefit some without injuring others in the market society. The increasing money supply is only a social waste and can only advantage some at the expense of others. And the benefits and burdens are distributed as just outlined: the early-comers gaining at the expense of later-comers. Certainly, the business and consumer borrowers from the bank—its clientele—benefit greatly from the new money (at least in the short run), since they are the ones who first receive it.

If inflation is any increase in the supply of money *not* matched by an increase in the gold or silver stock available, the method of inflation just depicted is called *credit expansion*—the creation of new money-substitutes, entering the economy *on the credit market*. As will be seen below, while credit expansion by a bank *seems* far more sober and respectable than outright spending of new money, it actually has far graver consequences for the economic system, consequences which most people would find especially undesirable. This inflationary credit is called *circulating credit,* as distinguished from the lending of *saved funds*—called *commodity credit*. In this book, the term "credit expansion" will apply only to increases in circulating credit.

Credit expansion has, of course, the same effect as any sort of inflation: prices tend to rise as the money supply increases. Like any inflation, it is a process of redistribution, whereby the inflators, and the part of the economy selling to them, gain at the expense of those who come last in line in the spending process. This is the charm of inflation—for the beneficiaries—and the reason why it has been so popular, particularly since modern banking processes have camouflaged its significance for those losers who are far removed from banking operations. The gains to the inflators are visible and dramatic; the losses to others hidden and unseen, but just as effective for all that. Just as half the economy are taxpayers and half tax-consumers, so half the economy are inflation-payers and the rest inflation-consumers.

Most of these gains and losses will be "short-run" or "one-shot"; they will occur during the process of inflation, but will cease after the new monetary equilibrium is reached. The inflators make their gains, but after the new money supply has been diffused throughout the economy, the inflationary gains and losses are ended. However, as we have seen in chapter 11, there are also *permanent* gains and losses resulting from inflation. For the new monetary equilibrium will not simply be the old one multiplied in all relations and quantities by the addition to the money supply. This was an assumption that the old "quantity theory" economists made. The valuations of the individuals making temporary gains and losses will differ. Therefore, each individual will react differently to his gains and losses and alter his relative spending patterns accordingly. Moreover, the new money will form a high ratio to the existing cash balance of some and a low ratio to that of others, and the result will be a variety of changes in spending patterns. Therefore, all prices will *not* have increased uniformly in the new equilibrium; the purchasing power of the monetary unit has fallen, but not equiproportionally over the entire array of exchange-values. Since some prices have risen more than others, therefore, some people will be *permanent* gainers, and some permanent losers, from the inflation.[107]

Particularly hard hit by an inflation, of course, are the relatively "fixed" income groups, who end their losses only after a long period or not at all. Pensioners and annuitants who have contracted for a fixed money income are examples of permanent as well as short-run losers. Life insurance benefits are permanently slashed. Conservative anti-inflationists' complaints about "the widows and orphans" have often been ridiculed, but they are no laughing matter nevertheless. For it is precisely the widows and orphans who bear a main part of the brunt of inflation.[108] Also suffering losses are creditors who have already extended their loans and find it too late to charge a purchasing-power premium on their interest rates.

Inflation also changes the market's consumption/investment ratio. Superficially, it seems that credit expansion greatly increases capital, for the new money enters the market as equivalent to new savings for lending. Since the new "bank money" is apparently added to the supply of savings on the credit market, businesses can now borrow at a lower rate of interest; hence inflationary credit expansion seems to offer the ideal escape from time preference, as well as an inexhaustible fount of added capital. Actually, this effect is illusory. On the contrary, inflation reduces saving and investment, thus lowering society's standard of living. It may even cause large-scale capital consumption. In the first place, as we just have seen, existing creditors are injured. This will tend to discourage lending in the future and thereby discourage saving-investment. Secondly, as we have seen in chapter 11, the inflationary process inherently yields a purchasing-power profit to the businessman, since he purchases factors and sells them at a later time when all prices are higher. The businessman may thus keep abreast of the price increase (we are here exempting from *variations* in price increases the terms-of-trade component), neither losing nor gaining from the inflation. But business accounting is traditionally geared to a world where the value of the monetary unit is stable. Capital goods purchased are entered in the asset column "at cost," i.e., at the price paid for them. When the firm later sells the product, the extra inflationary gain is not really a gain at all; for it must be absorbed in purchasing the replaced capital good at a higher price. Inflation, therefore, tricks the businessman: it destroys one of his main signposts and leads him to believe that he has gained extra profits when he is just able to replace capital. Hence, he will undoubtedly be tempted to consume out of these profits and thereby unwittingly consume capital as well. Thus, inflation tends at once to repress saving-investment and to cause consumption of capital.

The accounting error stemming from inflation has other economic consequences. The firms with the greatest degree of error will be those with capital equipment bought more preponderantly when prices were lowest. If the inflation has been going on for a while, these will be the firms with the oldest equipment. Their seemingly great profits will attract other firms into the field, and there will be a completely unjustified expansion of investment in a seemingly high-profit area. Conversely, there will be a deficiency of investment elsewhere. Thus, the error distorts the market's system of allocating resources and reduces its effectiveness in satisfying the consumer. The error will also be greatest in those firms with a greater proportion of capital equipment to product, and similar distorting effects will take place through excessive investment in heavily "capitalized" industries, offset by underinvestment elsewhere.[109]

B. CREDIT EXPANSION AND THE BUSINESS CYCLE

We have already seen in chapter 8 what happens when there is net saving-investment: an increase in the ratio of gross investment to consumption in the economy. Consumption expenditures fall, and the prices of consumers' goods fall. On the other hand, the production structure is lengthened, and the prices of original factors specialized in the higher stages rise. The prices of capital goods change like a lever being pivoted on a fulcrum at its center; the prices of consumers' goods fall most, those of first-order capital goods fall less; those of highest-order capital goods rise most, and the others less. Thus, the *price differentials* between the stages of production all diminish. Prices of original factors fall in the lower stages and rise in the higher stages, and the nonspecific original factors (mainly labor) shift partly from the lower to the higher stages. Investment tends to be centered in lengthier processes of production. The drop in price differentials is, as we have seen, *equivalent* to a fall in the natural rate of interest, which, of course, leads to a corollary drop in the loan rate. After a while the fruit of the more productive techniques arrives; and the real income of everyone rises.

Thus, an increase in saving resulting from a fall in time preferences leads to a fall in the interest rate and another stable equilibrium situation with a longer and narrower production structure. What happens, however, when the increase in investment is *not* due to a change in time preference and saving, but to credit expansion by the commercial banks? Is this a magic way of expanding the capital structure easily and costlessly, without reducing present consumption? Suppose that 6,000,000 gold ounces are being invested, and 4,000,000 consumed, in a certain period of time. Suppose, now, that the banks in the economy expand credit and increase the money supply by 2,000,000 ounces. What are the consequences? The new money is loaned to businesses.[110] These businesses, now able to acquire the money at a lower rate of interest, enter the capital goods' and original factors' market to bid resources away from the other firms. At any given time, the stock of goods is fixed, and the 2,000,000 new ounces are therefore employed in raising the prices of producers' goods. The rise in prices of capital goods will be imputed to rises in original factors.

The credit expansion reduces the market rate of interest. This means that price differentials are lowered, and, as we have seen in chapter 8, lower price differentials raise prices in the highest stages of production, shifting resources to these stages and also increasing the number of stages. As a result, the production structure is lengthened. The borrowing firms are led to believe that enough funds are available to permit them to embark on projects formerly unprofitable. On the free market, investment will always take place first in those projects that satisfy the most urgent wants of the consumers. Then the next most urgent wants are satisfied, etc. The interest rate regulates the temporal order of choice of projects in accordance with their urgency. A lower rate of interest on the market is a signal that more projects can be undertaken profitably. Increased saving on the free market leads to a stable equilibrium of production at a lower rate of interest. But not so with credit expansion: for the *original factors now receive increased money income.* In the free-market example, total money incomes remained the same. *The increased expenditure on higher stages was offset by decreased expenditure in the lower stages.* The "increased length" of the production structure was compensated by the "reduced width." But credit expansion pumps new money into the production structure: aggregate money incomes increase instead of remaining the same. The production structure has lengthened, but it has also *remained as wide,* without contraction of consumption expenditure.

The owners of the original factors, with their increased money income, naturally hasten to spend their new money. They allocate this spending between consumption and investment in accordance with their time preferences. Let us assume that the time-preference schedules of the people remain unchanged. This is a proper assumption, since there is no reason to assume that they have changed because of the inflation. Production now no longer reflects voluntary time preferences. Business has been led by credit expansion to invest in higher stages, *as if* more savings were available. Since they are not, business has overinvested in the higher stages and underinvested in the lower. Consumers act promptly to re-establish their time preferences—their preferred investment/consumption proportions and price differentials. The *differentials* will be re-established at the old, higher amount, i.e., the rate of interest will return to its free-market magnitude. As a result, the prices at the higher stages of production will fall drastically, the prices at the lower stages will rise again, and the entire new investment at the higher stages will have to be abandoned or sacrificed.

Altering our oversimplified example, which has treated only *two* stages, we see that the highest stages, believed profitable, have proved to be unprofitable. The pure rate of interest, reflecting consumer desires, is shown to have *really* been higher all along. The banks' credit expansion had tampered with that indispensable "signal"—the interest rate—that tells businessmen how much savings are available and what length of projects will be profitable. In the free market the interest rate is an indispensable guide, in the time dimension, to the urgency of consumer wants. But bank intervention in the market disrupts this free price and renders entrepreneurs unable to satisfy consumer desires properly or to estimate the most beneficial time structure of production. As soon as the consumers are able, i.e., as soon as the increased money enters their hands, they take the opportunity to re-establish their time preferences and therefore the old differentials and investment-consumption ratios. *Overinvestment* in the highest stages, and *underinvestment* in the lower stages are now revealed in all their starkness. The situation is analogous to that of a contractor misled into believing that he has more building material than he really has and then awakening to find that he has used up all his material on a capacious foundation (the higher stages), with no material left to complete the house.[111] Clearly, bank credit expansion cannot increase capital investment by one iota. Investment can still come only from savings.

It should not be surprising that the market tends to revert to its preferred ratios. The same process, as we have seen, takes place in all prices after a change in the money stock. Increased money always begins in one area of the economy, raising prices there, and filters and diffuses eventually over the whole economy, which then roughly returns to an equilibrium pattern conforming to the value of the money. If the market then tends to return to its preferred price-ratios after a change in the money supply, it should be evident that this *includes* a return to its preferred saving-investment ratio, reflecting social time preferences.

It is true, of course, that time preferences may alter in the interim, either for each individual or as a result of the redistribution during the change. The gainers may save more or less than the losers would have done. Therefore, the market will not return precisely to the old free-market interest rate and investment/consumption ratio, just as it will not return to its precise pattern of prices. It will revert to whatever the free-market interest rate is *now,* as determined by current time preferences. Some advocates of coercing the market into saving and investing more than it wishes have hailed credit expansion as leading to "forced saving," thereby increasing the capital-goods structure. But this can happen, *not* as a direct consequence of credit expansion, but only because effective time preferences have changed in that direction (i.e., time-preference schedules have shifted, or relatively more money is now in the hands of those with low time preferences). Credit expansion may well lead to the opposite effect: the gainers may have higher time preferences, in which case the free-market interest rate will be higher than before. Because these effects of credit expansion are completely uncertain and depend on the concrete data of each particular case, it is clearly far more cogent for advocates of forced saving to use the *taxation* process to make their redistribution.

The market therefore reacts to a distortion of the free-market interest rate by proceeding to revert to that very rate. The distortion caused by credit expansion deceives businessmen into believing that more savings are available and causes them to *malinvest*—to invest in projects that will turn out to be unprofitable when consumers have a chance to reassert their true preferences. This reassertion takes place fairly quickly—as soon as owners of factors receive their increased incomes and spend them.

This theory permits us to resolve an age-old controversy among economists: whether an increase in the money supply can lower the market rate of interest. To the mercantilists—and to the Keynesians—it was obvious that an increased money stock permanently lowered the rate of interest (given the demand for money). To the classicists it was obvious that changes in the money stock could affect only the value of the monetary unit, and not the rate of interest. The answer is that an increase in the supply of money *does* lower the rate of interest when it enters the market as credit expansion, but only temporarily. In the long run (and this long run is not very "long"), the market reestablishes the free-market time-preference interest rate and eliminates the change. In the long run a change in the money stock affects only the value of the monetary unit.

This process—by which the market reverts to its preferred interest rate and eliminates the distortion caused by credit expansion—*is,* moreover, *the business cycle!* Our analysis therefore permits the solution, not only of the theoretical problem of the relation between money and interest, but also of the problem that has plagued society for the last century and a half and more—the dread business cycle. And, furthermore, the theory of the business cycle can now be explained as a subdivision of our general theory of the economy.

Note the hallmarks of this distortion-reversion process. First, the money supply increases through credit expansion; then businesses are tempted to malinvest—overinvesting in higher-stage and durable production processes. Next, the prices and incomes of original factors increase and consumption increases, and businesses realize that the higher-stage investments have been wasteful and unprofitable. The first stage is the chief landmark of the "boom"; the second stage—the discovery of the wasteful malinvestments—is the "crisis." The *depression* is the next stage, during which malinvested businesses become bankrupt, and original factors must suddenly shift back to the lower stages of production. The liquidation of unsound businesses, the "idle capacity" of the malinvested plant, and the "frictional" unemployment of original factors that must suddenly and *en masse* shift to lower stages of production—these are the chief hallmarks of the depression stage.

We have seen in chapter 11 that the major unexplained features of the business cycle are the mass of error and the concentration of error and disturbance in the capital-goods industries.

Our theory of the business cycle solves both of these problems. The cluster of error suddenly revealed by entrepreneurs is due to the interventionary distortion of a key market signal—the interest rate. The concentration of disturbance in the capital-goods industries is explained by the spur to unprofitable higher-order investments in the boom period. And we have just seen that other characteristics of the business cycle are explained by this theory.

One point should be stressed: the *depression* phase is actually the *recovery* phase. Most people would be happy to keep the boom period, where the inflationary gains are visible and the losses hidden and obscure. This boom euphoria is heightened by the capital consumption that inflation promotes through illusory accounting profits. The stages that people complain about are the crisis and depression. But the latter periods, it should be clear, do not cause the trouble. The trouble occurs during the boom, when malinvestments and distortions take place; the crisis-depression phase is the curative period, after people have been forced to recognize the malinvestments that have occurred. The depression period, therefore, *is* the necessary recovery period; it is the time when bad investments are liquidated and mistaken entrepreneurs leave the market—the time when "consumer sovereignty" and the free market reassert themselves and establish once again an economy that benefits every participant to the maximum degree. The depression period ends when the free-market equilibrium has been restored and expansionary distortion eliminated.

It should be clear that any governmental interference with the depression process can only prolong it, thus making things worse from almost everyone's point of view. Since the depression process *is* the recovery process, any halting or slowing down of the process impedes the advent of recovery. The depression readjustments must work themselves out before recovery can be complete. The more these readjustments are delayed, the longer the depression will have to last, and the longer complete recovery is postponed. For example, if the government keeps wage rates up, it brings about permanent unemployment. If it keeps prices up, it brings about unsold surplus. And if it spurs credit expansion again, then new malinvestment and later depressions are spawned.

Many nineteenth-century economists referred to the business cycle in a biological metaphor, likening the depression to a painful but necessary curative of the alcoholic or narcotic jag which is the boom, and asserting that any tampering with the depression delays recovery. They have been widely ridiculed by present-day economists. The ridicule is misdirected, however, for the biological analogy is in this case correct.

One obvious conclusion from our analysis is the absurdity of the "underconsumptionist" remedies for depression—the idea that the crisis is caused by underconsumption and that the way to cure the depression is to stimulate consumption expenditures. The reverse is clearly the truth. What has brought about the crisis is precisely the fact that entrepreneurial investment erroneously anticipated greater savings, and that this error is revealed by consumers' re-establishing their desired proportion of consumption. "Overconsumption" or "undersaving" has brought about the crisis, although it is hardly fair to pin the guilt on the consumer, who is simply trying to restore his preferences after the market has been distorted by bank credit. The only way to hasten the curative process of the depression is for people to save and invest *more* and consume *less,* thereby finally justifying some of the malinvestments and mitigating the adjustments that have to be made.

One problem has been left unexplained. We have seen that the reversion period is short and that factor incomes increase rather quickly and start restoring the free-market consumption/saving ratios. But why do booms, historically, continue for several years? What delays the reversion process? The answer is that as the boom begins to peter out from an injection of credit expansion, the banks inject a further dose. In short, the only way to *avert* the onset of the depression-adjustment process is to continue inflating money and credit. For only continual doses of new money on the credit market will keep the boom going and the new stages profitable. Furthermore, only *ever increasing* doses can step up the boom, can lower interest rates further, and expand the production structure, for as the prices rise, more and more money will be needed to perform the same amount of work. Once the credit expansion stops, the market ratios are re-established, and the seemingly glorious new investments turn out to be malinvestments, built on a foundation of sand.

How long booms can be kept up, what limits there are to booms in different circumstances, will be discussed below. But it is clear that prolonging the boom by ever larger doses of credit expansion will have only one result: to make the inevitably ensuing depression longer and more grueling. The larger the scope of malinvestment and error in the boom, the greater and longer the task of readjustment in the depression. The way to prevent a depression, then, is simple: avoid starting a boom. And to avoid starting a boom all that is necessary is to pursue a truly free-market policy in money, i.e., a policy of 100% specie reserves for banks and governments.

Credit expansion always generates the business cycle process, even when other tendencies cloak its workings. Thus, many people believe that all is well if prices do not rise or if the actually recorded interest rate does not fall. But prices may well not rise because of some counteracting force—such as an increase in the supply of goods or a rise in the demand for money. But this does not mean that the boom-depression cycle fails to occur. The essential processes of the boom—distorted interest rates, malinvestments, bankruptcies, etc.—continue unchecked. This is one of the reasons why those who approach business cycles from a statistical point of view and try in that way to arrive at a theory are in hopeless error. Any historical-statistical fact is a complex resultant of many causal influences and cannot be used as a simple element with which to construct a causal theory. The point is that credit expansion raises prices *beyond what they would have been in the free market* and thereby creates the business cycle. Similarly, credit expansion does not necessarily lower the interest rate below the rate *previously* recorded; it lowers the rate *below what it would have been in the free market* and thus creates distortion and malinvestment. Recorded interest rates in the boom will generally *rise,* in fact, because of the *purchasing-power component* in the market interest rate. An increase in prices, as we have seen, generates a positive purchasing-power component in the natural interest rate, i.e., the rate of return earned by businessmen on the market. In the free market this would quickly be reflected in the loan rate, which, as we have seen above, is completely dependent on the natural rate. But a continual influx of circulating credit *prevents* the loan rate from catching up with the natural rate, and thereby generates the business-cycle process.[112] A further corollary of this bank-created discrepancy between the loan rate and the natural rate is that creditors on the loan market suffer losses for the benefit of their debtors: the capitalists on the stock market or those who own their own businesses. The latter gain during the boom by the differential between the loan rate and the natural rate, while the creditors (apart from banks, which create their own money) lose to the same extent.

After the boom period is over, what is to be done with the malinvestments? The answer depends on their profitability for further use, i.e., on the degree of error that was committed. Some malinvestments will have to be abandoned, since their earnings from consumer demand will not even cover the current costs of their operation. Others, though monuments of failure, will be able to yield a profit over current costs, although it will not pay to replace them as they wear out. Temporarily working them fulfills the economic principle of always making the best of even a bad bargain.

Because of the malinvestments, however, the boom always leads to general *impoverishment,* i.e., reduces the standard of living below what it would have been in the absence of the boom. For the credit expansion has caused the squandering of scarce resources and scarce capital. Some resources have been completely wasted, and even those malinvestments that continue in use will satisfy consumers less than would have been the case without the credit expansion.

C. SECONDARY DEVELOPMENTS OF THE BUSINESS CYCLE

In the previous section we have presented the basic process of the business cycle. This process is often accentuated by other or "secondary" developments induced by the cycle. Thus, the expanding money supply and rising prices are likely to lower the demand for money. Many people begin to anticipate higher prices and will therefore dishoard. The lowered demand for money raises prices further. Since the impetus to expansion comes first in expenditure on capital goods and later in consumption, this "secondary effect" of a lower demand for money may take hold first in producers'-goods industries. This lowers the price-and-profit differentials further and hence widens the distance that the rate of interest will fall below the free-market rate during the boom. The effect is to aggravate the need for readjustment during the depression. The adjustment would cause some fall in the prices of producers' goods anyway, since the essence of the adjustment is to raise price differentials. The extra distortion requires a steeper fall in the prices of producers' goods before recovery is completed.

As a matter of fact, the demand for money generally *rises* at the beginning of an inflation. People are accustomed to thinking of the value of the monetary unit as inviolate and of prices as remaining at some "customary" level. Hence, when prices first begin to rise, most people believe this to be a purely temporary development, with prices soon due to recede. This belief mitigates the extent of the price rise for a time. Eventually, however, people realize that credit expansion has continued and undoubtedly will continue, and their demand for money dwindles, becoming lower than the original level.

After the crisis arrives and the depression begins, various secondary developments often occur. In particular, for reasons that will be discussed further below, the crisis is often marked not only by a *halt* to credit expansion, but by an actual *deflation*—a contraction in the supply of money. The deflation causes a further decline in prices. Any increase in the demand for money will speed up adjustment to the lower prices. Furthermore, when deflation takes place first on the loan market, i.e., as *credit contraction* by the banks—and this is almost always the case—this will have the beneficial effect of speeding up the depression-adjustment process. For credit contraction creates higher price differentials. And the essence of the required adjustment is to return to higher price differentials, i.e., a higher "natural" rate of interest. Furthermore, deflation will hasten adjustment in yet another way: for the accounting error of inflation is here reversed, and businessmen will think their losses are more, and profits less, than they really are. Hence, they will save more than they would have with correct accounting, and the increased saving will speed adjustment by supplying some of the needed deficiency of savings.

It may well be true that the deflationary process will overshoot the free-market equilibrium point and raise price differentials and the interest rate above it. But if so, no harm will be done, since a credit contraction can create no malinvestments and therefore does not generate another boom-bust cycle.[113] And the market will correct the error rapidly. When there is such excessive contraction, and consumption is too high in relation to savings, the money income of businessmen is reduced, and their spending on factors declines—especially in the higher orders. Owners of original factors, receiving lower incomes, will spend less on consumption, price differentials and the interest rate will again be lowered, and the free-market consumption/investment ratios will be speedily restored.

Just as inflation is generally popular for its narcotic effect, deflation is always highly unpopular for the opposite reason. The contraction of money is visible; the benefits to those whose buying prices fall first and who lose money last remain hidden. And the illusory accounting losses of deflation make businesses believe that their losses are greater, or profits smaller, than they actually are, and this will aggravate business pessimism.

It is true that deflation takes from one group and gives to another, as does inflation. Yet not only does credit contraction speed recovery and counteract the distortions of the boom, but it also, in a broad sense, takes away from the original coercive gainers and benefits the original coerced losers. While this will certainly not be true in every case, in the broad sense much the same groups will benefit and lose, but in reverse order from that of the redistributive effects of credit expansion. Fixed-income groups, widows and orphans, will gain, and businesses and owners of original factors previously reaping gains from inflation will lose. The longer the inflation has continued, of course, the less the same individuals will be compensated.[114]

Some may object that deflation "causes" unemployment. However, as we have seen above, deflation can lead to continuing unemployment only if the government or the unions keep wage rates above the discounted marginal value products of labor. If wage rates are allowed to fall freely, no continuing unemployment will occur.

Finally, deflationary credit contraction is, necessarily, severely limited. Whereas credit can expand (barring various economic limits to be discussed below) virtually to infinity, circulating credit can contract only as far down as the total amount of specie in circulation. In short, its maximum possible limit is the eradication of all previous credit expansion.

The business-cycle analysis set forth here has essentially been that of the "Austrian" school, originated and developed by Ludwig von Mises and some of his students.[115] A prominent criticism of this theory is that it "assumes the existence of full employment" or that its analysis holds only *after* "full employment" has been attained. Before that point, say the critics, credit expansion will beneficently put these factors to work and not generate further malinvestments or cycles. But, in the first place, inflation will put no unemployed factors to work unless their owners, though holding out for a money price higher than their marginal value product, are blindly content to accept the necessarily lower real price when it is camouflaged as a rise in the "cost of living." And credit expansion generates further cycles whether or not there are unemployed factors. It creates more distortions and malinvestments, delays indefinitely the process of recovery from the previous boom, and makes necessary an eventually far more grueling recovery to adjust to the new malinvestments as well as to the old. If idle capital goods are now set to work, this "idle capacity" is the hangover effect of previous wasteful malinvestments, and hence is really submarginal and not worth bringing into production. Putting the capital to work again will only redouble the distortions.[116]

D. THE LIMITS OF CREDIT EXPANSION

Having investigated the consequences of credit expansion, we must discuss the important question: If fractional-reserve banking is legal, are there any natural *limits* to credit expansion by the banks? The one basic limit, of course, is the necessity of the banks to redeem their money-substitutes on demand. Under a gold or silver standard, they must redeem in specie; under a government fiat paper standard (see below), the banks have to redeem in government paper. In any case, they must redeem in standard money or its virtual equivalent. Therefore, every fractional reserve bank depends for its very existence on persuading the public—specifically its *clients*—that all is well and that it will be able to redeem its notes or deposits whenever the clients demand. Since this is palpably not the case, the continuance of confidence in the banks is something of a psychological marvel.[117] It is certain, at any rate, that a wider knowledge of praxeology among the public would greatly weaken confidence in the banking system. For the banks are in an inherently weak position. Let just a few of their clients lose confidence and begin to call on the banks for redemption, and this will precipitate a scramble by other clients to make sure that *they* get their money while the banks' doors are still open. The obvious—and justifiable—panic of the banks should any sort of "run" develop encourages other clients to do the same and aggravates the run still further. At any rate, runs on banks can wreak havoc, and, of course, if pursued consistently, could close every bank in the country in a few days.[118]

Runs, therefore, and the constant underlying threat of their occurrence, are one of the prime limits to credit expansion. Runs often develop during a business cycle crisis, when debts are being defaulted and failures become manifest. Runs and the fear of runs help to precipitate deflationary credit contraction.

Runs may be an ever-present threat, but, as effective limitations, they are not generally active. When they do occur, they usually wreck the banks. The fact that a bank is in existence at all signifies that a run has not developed. A more active, every-day limitation is the relatively *narrow range* of a bank's clientele. The clientele of a bank consists of those people willing to hold its deposits or notes (its money-substitutes) in lieu of money proper. It is an empirical fact, in almost all cases, that one bank does not have the patronage of all people in the market society or even of all those who prefer to use bank money rather than specie. It is obvious that the more banks exist, the more restricted will be the clientele of any one bank. People decide which bank to use on many grounds; reputation for integrity, friendliness of service, price of service, and convenience of location may all play a part.

How does the narrow range of a bank's clientele limit its potentiality for credit expansion? The newly issued money-substitutes are, of course, loaned to a bank's clients. The client then spends the new money on goods and services. The new money begins to be diffused throughout the society. Eventually—usually very quickly—it is spent on the goods or services of people who use a *different* bank. Suppose that the Star Bank has expanded credit; the newly issued Star Bank's notes or deposits find their way into the hands of Mr. Jones, who uses the City Bank. Two alternatives may occur, either of which has the same economic effect: (*a*) Jones accepts the Star Bank's notes or deposits, and deposits them in the City Bank, which calls on the Star Bank for redemption; or (*b*) Jones refuses to accept the Star Bank's notes and insists that the Star client—say Mr. Smith—who bought something from Jones, redeem the note himself and pay Jones in acceptable standard money.

Thus, while gold or silver is acceptable throughout the market, a bank's money-substitutes are acceptable only to its own clientele. Clearly, a single bank's credit expansion is limited, and this limitation is stronger (*a*) the narrower the range of its clientele, and (*b*) the greater its issue of money-substitutes in relation to that of competing banks. In illustration of the first point, let us assume that each bank has only one client. Then it is obvious that there will be very little room for credit expansion. At the opposite extreme, if one bank is used by everybody in the economy, there will be no demands for redemption resulting from its clients' purchasing from nonclients. It is obvious that, *ceteris paribus,* a numerically smaller clientele is more restrictive of credit expansion.

As regards the second point, the greater the degree of relative credit expansion by any one bank, the sooner will the day of redemption—and potential bankruptcy—be at hand. Suppose that the Star Bank expands credit, while none of the competing banks do. This means that the Star Bank's clientele have added considerably to their cash balances; as a result the marginal utility to them of each unit of money to hold declines, and they are impelled to spend a great proportion of the new money. Some of this increased spending will be on one another's goods and services, but it is clear that the greater the credit expansion, the greater will be the tendency for their spending to "spill over" onto the goods and services of nonclients. This tendency to spill over, or "drain," is greatly enhanced when increased spending by clients on the goods and services of other clients raises their prices. In the meanwhile, the prices of the goods sold by nonclients remain the same. As a consequence, clients are impelled to buy more from nonclients and less from one another; while nonclients buy less from clients and more from one another. The result is an "unfavorable" balance of trade from clients to nonclients.[119] It is clear that this tendency of money to seek a uniform level of exchange value throughout the entire market is an example of the process by which new money (in this case, new money-substitutes) is diffused through the market. The greater the relative credit expansion by the bank, then, the greater and more rapid will be the drain and consequent pressure on an expanding bank for redemption.

The purpose of banks' keeping any specie reserves in their vaults (assuming no legal reserve requirements) now becomes manifest. It is not to meet bank runs—since no fractional-reserve bank can be equipped to withstand a run. It is to meet the demands for redemption which will inevitably come from nonclients.

Mises has brilliantly shown that a subdivision of this process was discovered by the British Currency School and by the classical "international trade" theorists of the nineteenth century. These older economists assumed that all the banks in a certain region or country expanded credit together. The result was a rise in the prices of goods produced in that country. A further result was an "unfavorable" balance of trade, i.e., an outflow of standard specie to other countries. Since other countries did not patronize the expanding country's banks, the consequence was a "specie drain" from the expanding country and increased pressure for redemption on its banks.

Like all parts of the overstressed and overelaborated theory of "international trade," this analysis is simply a special subdivision of "general" economic theory. And cataloging it as "international trade" theory, as Mises has shown, underestimates its true significance.[120, 121]

Thus, the more freely competitive and numerous are the banks, the less they will be able to expand fiduciary media, even if they are left free to do so. As we have noted in chapter 11, such a system is known as "free banking." [122] A major objection to this analysis of free banking has been the problem of bank "cartels." If banks get together and agree to expand their credits simultaneously, the clientele limitation vis-à-vis competing banks will be removed, and the clientele of each bank will, in effect, increase to include all bank users. Mises points out, however, that the sounder banks with higher fractional reserves will not wish to lose the good will of their own clients and risk bank runs by entering into collusive agreements with weaker banks.[123] This consideration, while placing limits on such agreements, does not rule them out altogether. For, after all, no fractional-reserve banks are *really* sound, and if the public can be led to believe that, say, an 80%-specie reserve is sound, it can believe the same about 60%- or even 10%-reserve banks. Indeed, the fact that the weaker banks are allowed by the public to exist at all demonstrates that the more conservative banks may not lose much good will by agreeing to expand with them.

As Mises has demonstrated, there is no question that, from the point of view of opponents of inflation and credit expansion, free banking is superior to a central banking system (see below). But, as Amasa Walker stated:

> Much has been said, at different times, of the desirableness of *free banking*. Of the propriety and rightfulness of allowing any person who chooses to carry on banking, as freely as farming or any other branch of business, there can be no doubt. But, while banking, as at present, means the issuing of inconvertible paper, the more it is guarded and restricted the better. But when such issues are entirely forbidden, and only notes equivalent to certificates of so much coin are issued, banking may be as free as brokerage. The only thing to be secured would be that no issues should be made except upon specie in hand.[124]

E. THE GOVERNMENT AS PROMOTER OF CREDIT EXPANSION

Historically, governments have fostered and encouraged credit expansion to a great degree. They have done so by *weakening* the limitations that the market places on bank credit expansion. One way of weakening is to anesthetize the bank against the threat of bank runs. In nineteenth-century America, the government permitted banks, when they got into trouble in a business crisis, to suspend specie payment while continuing in operation. They were temporarily freed from their contractual obligation of paying their debts, while they could continue lending and even force their debtors to repay in their own bank notes. This is a powerful way to eradicate limitations on credit expansion, since the banks know that if they overreach themselves, the government will permit them blithely to avoid payment of their contractual obligations.

Under a fiat money standard, governments (or their central banks) may obligate themselves to bail out, with increased issues of standard money, any bank or any major bank in distress. In the late nineteenth century, the principle became accepted that the central bank must act as the "lender of last resort," which will lend money freely to banks threatened with failure. Another recent American device to abolish the confidence limitation on bank credit is "deposit insurance," whereby the government guarantees to furnish paper money to redeem the banks' demand liabilities. These and similar devices remove the market brakes on rampant credit expansion.

A second device, now so legitimized that any country lacking it is considered hopelessly "backward," is the central bank. The central bank, while often nominally owned by private individuals or banks, is run directly by the national government. Its purpose, not always stated explicitly, is to remove the competitive check on bank credit provided by a multiplicity of independent banks. Its aim is to make sure that all the banks in the country are co-ordinated and will therefore expand or contract together—at the will of the government. And we have seen that co-ordination of expansion greatly weakens the market's limits.

The crucial way by which governments have established central bank control over the commercial banking system is by granting the bank *a monopoly of the note issue* in the country. As we have seen, money-substitutes may be issued in the form of notes or book deposits. Economically, the two forms are identical. The State has found it convenient, however, to distinguish between the two and to outlaw all note issue by private banks. Such nationalizing of the note-issue business forces the commercial banks to go to the central bank whenever their customers desire to exchange demand deposits for paper notes. To obtain notes to furnish their clients, commercial banks must buy them from the central bank. Such purchases can be made only by selling their gold coin or other standard money or by drawing on the banks' deposit accounts with the central bank.

Since the public always wishes to hold some of its money in the form of notes and some in demand deposits, the banks must establish a continuing relationship with the central bank to be assured a supply of notes. Their most convenient procedure is to establish demand deposit accounts with the central bank, which thereby becomes the "bankers' bank." These demand deposits (added to the gold in their vaults) become the reserves of the banks. The central bank can also more freely create demand liabilities not backed 100% by gold, and these increased liabilities add to the reserves and demand deposits held by banks or else increase central bank notes outstanding. The rise in reserves of banks throughout the country will spur them to expand credit, while any decrease in these reserves will induce a general contraction in credit.

The central bank can increase the reserves of a country's banks in three ways: (*a*) by simply lending them reserves; (*b*) by purchasing their assets, thereby adding directly to the banks' deposit accounts with the central bank, or (*c*) by purchasing the IOU's of the public, which will then deposit the drafts on the central bank in the various banks that serve the public directly, thereby enabling them to use the credits on the central bank to add to their own reserves. The second process is known as *discounting;* the latter as *open market purchase.* A lapse in discounts as the loans mature will lower reserves, as will *open market sales.* In open market sales, the people will pay the central bank for its assets, purchased with checks drawn on their accounts at the banks; and the central bank exacts payment by reducing bank reserves on its books. In most cases, the assets purchased or sold on the open market are government IOU's.[125]

Thus, the banking system becomes co-ordinated under the aegis of the government. The central bank is always accorded a great deal of prestige by its creator government. Often the government makes its notes legal tender. Under the gold standard, the wide resources which it commands, added to the fact that the whole country is its clientele, usually make negligible any trouble the bank may have in redeeming its liabilities in gold. Furthermore, it is certain that no government will let its own central bank (i.e., itself) go bankrupt; the central bank will always be permitted to suspend specie payment in times of serious difficulty. It can therefore inflate and expand credit itself (through rediscounts and open market purchases) and, by adding to bank reserves, spur a *multiple* bank credit expansion throughout the country. The effect is multiple because banks will generally keep a certain proportion of reserves to liabilities—based on estimates of nonclient redemption—and a general increase in their reserves will induce a multiple expansion of fiduciary media. In fact, the multiple will even increase, for the knowledge that all the banks are co-ordinated and expanding together decreases the possibility of nonclient redemption and therefore the proportion of reserves that each bank will wish to keep.

When the government "goes off" the gold standard, central bank notes then become legal tender and virtually the standard money. It then cannot possibly fail, and this, of course, practically eliminates limitations on its credit expansion. In the present-day United States, for example, the current basically fiat standard (also known as a "restricted international gold bullion standard") virtually eliminates pressure for redemption, while the central bank's ready provision of reserves as well as deposit insurance eliminates the threat of bank failure.[126] In order to insure centralized control by the government over bank credit, the United States enforces on banks a certain minimum ratio of reserves (almost wholly deposits with the central bank) to deposits.

So long as a country is in any sense "on the gold standard," the central bank and the banking system must worry about an external drain of specie should the inflation become too great. Under an unrestricted gold standard, it must also worry about an internal drain resulting from the demands of those who do not use the banks. A shift in public taste from deposits to notes will embarrass the commercial banks, though not the central bank. Assiduous propaganda on the conveniences of banking, however, has reduced the ranks of those not using banks to a few malcontents. As a result, the only limitation on credit expansion is now external. Governments, of course, are always anxious to remove all checks on their powers of inducing monetary expansion. One way of removing the external threat is to foster international cooperation, so that all governments and central banks expand their money supply at a uniform rate. The "ideal" condition for unlimited inflation is, of course, a world fiat paper money, issued by a world central bank or other governmental authority. Pure fiat money on a national scale would serve almost as well, but there would then be the embarrassment of national moneys depreciating in terms of other moneys, and imports becoming much more expensive.[127]

F. THE ULTIMATE LIMIT: THE RUNAWAY BOOM

With the establishment of fiat money by a State or by a World State, it would seem that all limitations on credit expansion, or on any inflation, are eliminated. The central bank can issue limitless amounts of nominal units of paper, unchecked by any necessity of digging a commodity out of the ground. They may be supplied to banks to bolster their credit at the pleasure of the government. No problems of internal or external drain exist. And if there existed a World State, or a co-operating cartel of States, with a world bank and world paper money, and gold and silver money were outlawed, could not the World State then expand the money supply at will with no foreign exchange or foreign trade difficulties, permanently redistributing wealth from the market's choice to its own favorites, from voluntary producers to the ruling castes?

Many economists and most other people assume that the State could accomplish this goal. Actually, it could not, for there is an ultimate limit on inflation, a very wide one, to be sure, but a terrible limit that will in the end conquer any inflation. Paradoxically, this is the phenomenon of *runaway inflation,* or *hyperinflation.*

When the government and the banking system begin inflating, the public will usually aid them unwittingly in this task. The public, not cognizant of the true nature of the process, believes that the rise in prices is transient and that prices will soon return to "normal." As we have noted above, people will therefore hoard more money, i.e., keep a greater proportion of their income in the form of cash balances. The social demand for money, in short, increases. As a result, prices tend to increase less than proportionately to the increase in the quantity of money. The government obtains *more real* resources from the public than it had expected, since the public's demand for these resources has declined.

Eventually, the public begins to realize what is taking place. It seems that the government is attempting to use inflation as a permanent form of taxation. But the public has a weapon to combat this depredation. Once people realize that the government will continue to inflate, and therefore that prices will continue to rise, they will step up their purchases of goods. For they will realize that they are gaining by buying now, instead of waiting until a future date when the value of the monetary unit will be lower and prices higher. In other words, the social demand for money falls, and prices now begin to rise more rapidly than the increase in the supply of money. When this happens, the confiscation by the government, or the "taxation" effect of inflation, will be lower than the government had expected, for the increased money will be reduced in purchasing power by the greater rise in prices. This stage of the inflation is the beginning of hyperinflation, of the runaway boom.[128]

The lower demand for money allows fewer resources to be extracted by the government, but the government can still obtain resources so long as the market continues to use the money. The accelerated price rise will, in fact, lead to complaints of a "scarcity of money" and stimulate the government to greater efforts of inflation, thereby causing even more accelerated price increases. This process will not continue long, however. As the rise in prices continues, the public begins a "flight from money," getting rid of money as soon as possible in order to invest in real goods—almost *any* real goods—as a store of value for the future. This mad scramble away from money, lowering the demand for money to hold practically to zero, causes prices to rise upward in astronomical proportions. The value of the monetary unit falls practically to zero. The devastation and havoc that the runaway boom causes among the populace is enormous. The relatively fixed-income groups are wiped out. Production declines drastically (sending up prices further), as people lose the incentive to work—since they must spend much of their time getting rid of money. The main desideratum becomes getting hold of real goods, whatever they may be, and spending money as soon as received. When this runaway stage is reached, the economy in effect breaks down, the market is virtually ended, and society reverts to a state of virtual barter and complete impoverishment.[129] Commodities are then slowly built up as media of exchange. The public has rid itself of the inflation burden by its ultimate weapon: lowering the demand for money to such an extent that the government's money has become worthless. When all other limits and forms of persuasion fail, this is the only way—through chaos and economic breakdown—for the people to force a return to the "hard" commodity money of the free market.

The most famous runaway inflation was the German experience of 1923. It is particularly instructive because it took place in one of the world's most advanced industrial countries.[130] The chaotic events of the German hyperinflation and other accelerated booms, however, are only a pale shadow of what would happen under a World State inflation. For Germany was able to recover and return to a full monetary market economy quickly, since it could institute a new currency based on exchanges with other pre-existing moneys (gold or foreign paper). As we have seen, however, Mises' regression theorem shows that no money can be established on the market except as it can be exchanged for a previously-existing money (which in turn must have ultimately related back to a commodity in barter). If a World State outlaws gold and silver and establishes a unitary fiat money, which it proceeds to inflate until a runaway boom destroys it, *there will be no pre-existing money on the market*. The task of reconstruction will then be enormously more difficult.

G. INFLATION AND COMPENSATORY FISCAL POLICY

Inflation, in recent years, has been generally defined as an increase in prices. This is a highly unsatisfactory definition. Prices are highly complex phenomena, activated by many different causal factors. They may increase or decrease from the goods side—i.e., as a result of a change in the supply of goods on the market. They may increase or decrease because of a change in the social demand for money to hold; or they may rise or fall from a change in the supply of money. To lump all of these causes together is misleading, for it glosses over the separate influences, the isolation of which is the goal of science. Thus, the money supply may be increasing, while at the same time the social demand for money is increasing from the goods side, in the form of increased supplies of goods. Each may offset the other, with no general price changes occurring. Yet both processes perform their work nevertheless. Resources will still shift as a result of inflation, and the business cycle caused by credit expansion will still appear. It is, therefore, highly inexpedient to define inflation as a rise in prices.

Movements in the supply-of-goods and in the demand-for-money schedules are all the results of voluntary changes of preferences on the market. The same is true for increases in the supply of gold or silver. But increases in fiduciary or fiat media are acts of fraudulent intervention in the market, distorting voluntary preferences and the voluntarily determined pattern of income and wealth. Therefore, the most expedient definition of "inflation" is one we have set forth above: an increase in the supply of money beyond any increase in specie.[131]

The absurdity of the various governmental programs for "fighting inflation" now becomes evident. Most people believe that government officials must constantly pace the ramparts, armed with a huge variety of "control" programs designed to combat the inflation enemy. Yet all that is really necessary is that the government and the banks (nowadays controlled almost completely by the government) cease *inflating*.[132] The absurdity of the term "inflationary pressure" also becomes clear. Either the government and banks *are inflating* or they are not; there is no such thing as "inflationary pressure."[133]

The idea that the government has the duty to tax the public in order to "sop up excess purchasing power" is particularly ludicrous.[134] If inflation has been under way, this "excess purchasing power" is precisely the result of previous governmental inflation. In short, the government is supposed to burden the public twice: once in appropriating the resources of society by inflating the money supply, and again, by taxing back the new money from the public. Rather than "checking inflationary pressure," then, a tax surplus in a boom will simply place an additional burden upon the public. If the taxes are used for further government spending, or for repaying debts to the public, then there is not even a deflationary effect. If the taxes are used to redeem government debt held by the banks, the deflationary effect will not be a credit contraction and therefore will not correct maladjustments brought about by the previous inflation. It will, indeed, create further dislocations and distortions of its own.

Keynesian and neo-Keynesian "compensatory fiscal policy" advocates that government deflate during an "inflationary" period and inflate (incur deficits, financed by borrowing from the banks) to combat a depression. It is clear that government inflation can relieve unemployment and unsold stocks only if the process dupes the owners into accepting lower *real* prices or wages. This "money illusion" relies on the owners' being too ignorant to realize when their real incomes have declined—a slender basis on which to ground a cure. Furthermore, the inflation will benefit part of the public at the expense of the rest, and any credit expansion will only set a further "boom-bust" cycle into motion. The Keynesians depict the free market's monetary-fiscal system as minus a steering wheel, so that the economy, though readily adjustable in other ways, is constantly walking a precarious tightrope between depression and unemployment on the one side and inflation on the other. It is then necessary for the government, in its wisdom, to step in and steer the economy on an even course. After our completed analysis of money and business cycles, however, it should be evident that the true picture is just about the reverse. The free market, unhampered, would not be in danger of suffering inflation, deflation, depression, or unemployment. But the intervention of government *creates* the tightrope for the economy and is constantly, if sometimes unwittingly, pushing the economy into these pitfalls.

12. *Conclusion: The Free Market and Coercion*

We have thus concluded our analysis of voluntary and free action and its consequences in the free market, and of violent and coercive action and *its* consequences in economic intervention. Superficially, it looks to many people as if the free market is a chaotic and anarchic place, while government intervention imposes order and community values upon this anarchy. Actually, praxeology—economics—shows us that the truth is quite the reverse. We may divide our analysis into the direct, or palpable, effects, and the indirect, hidden effects of the two principles. Directly, voluntary action—free exchange—leads to the mutual benefit of both parties to the exchange. Indirectly, as our investigations have shown, the network of these free exchanges in society—known as the "free market"—creates a delicate and even awe-inspiring mechanism of harmony, adjustment, and precision in allocating productive resources, deciding upon prices, and gently but swiftly guiding the economic system toward the greatest possible satisfaction of the desires of all the consumers. In short, not only does the free market *directly* benefit all parties and leave them free and uncoerced; it also creates a mighty and efficient instrument of social *order*. Proudhon, indeed, wrote better than he knew when he called "Liberty, the Mother, not the Daughter, of Order."

On the other hand, coercion has diametrically opposite features. Directly, coercion benefits one party only at the expense of others. Coerced exchange is a system of exploitation of man by man, in contrast to the free market, which is a system of cooperative exchanges in the exploitation of *nature* alone. And not only does coerced exchange mean that some live at the expense of others, but, indirectly, as we have just observed, coercion leads only to further problems: it is inefficient and chaotic, it cripples production, and it leads to cumulative and unforeseen difficulties. Seemingly orderly, coercion is not only exploitative; it is also profoundly *disorderly*.

The major function of praxeology—of economics—is to bring to the world the knowledge of these indirect, these hidden, consequences of the different forms of human action. The hidden order, harmony, and efficiency of the voluntary free market, the hidden disorder, conflict, and gross inefficiency of coercion and intervention—these are the great truths that economic science, through deductive analysis from self-evident axioms, reveals to us. Praxeology cannot, by itself, pass ethical judgment or make policy decisions. Praxeology, through its *wertfrei* laws, informs us that the workings of the voluntary principle and of the free market lead inexorably to freedom, prosperity, harmony, efficiency, and order; while coercion and government intervention lead inexorably to hegemony, conflict, exploitation of man by man, inefficiency, poverty, and chaos. At this point, praxeology retires from the scene; and it is up to the citizen—the ethicist—to choose his political course according to the values that he holds dear.

APPENDIX A: GOVERNMENT BORROWING

The major source of government revenue is taxation. Another source is government borrowing. Government borrowing from the banking system is really a form of inflation: it creates new money-substitutes that go first to the government and then diffuse, with each step of spending, into the community. Inflation is discussed in the text above. This is a process entirely different from borrowing from the public, which is not inflationary, for the latter transfers saved funds from private to governmental hands rather than creates new funds. Its economic effect is to divert savings from the channels most desired by the consumers and to shift them to the uses desired by government officials. Hence, from the point of view of the consumers, borrowing from the public wastes savings. The consequences of this waste are a lowering of the capital structure of the society and a lowering of the general standard of living in the present and the future. Diversion and waste of savings from investment causes interest rates to be higher than they otherwise would, since now private uses must compete with government demands. Public borrowing strikes at individual *savings* more effectively even than taxation, for it specifically lures away *savings* rather than taxing income in general.

It might be objected that lending to the government is voluntary and is therefore equivalent to any other voluntary contribution to the government; the "diversion" of funds is something desired by the consumers and hence by society.[135] Yet the process is "voluntary" only in a one-sided way. For we must not forget that the government enters the time market as a bearer of coercion and as a guarantor that it will use this coercion to obtain funds for repayment. The government is armed by coercion with a crucial power denied to all other people on the market; it is always assured of funds, whether by taxation or by inflation. The government will therefore be able to divert considerable funds from savers, and at an interest rate lower than any paid elsewhere. For the risk component in the interest rate paid by the government will be lower than that paid by any other borrowers.[136]

Lending to government, therefore, may be voluntary, but the process is hardly voluntary when considered as a whole. It is rather a voluntary participation in future confiscation to be committed by the government. In fact, lending to government *twice* involves diversion of private funds to the government: once when the loan is made, and private savings are diverted to government spending; and again when the government taxes or inflates (or borrows again) to obtain the money to repay the loan. Then, once more, a coerced diversion takes place from private producers to the government, the proceeds of which, after payment of the bureaucracy for handling services, accrues to the government bondholders. The latter have thus become a part of the State apparatus and are engaging in a "relation of State" with the tax-paying producers.[137]

The ingenious slogan that the public debt does not matter because "we owe it to ourselves" is clearly absurd. The crucial question is: Who is the "we" and who are the "ourselves"? Analysis of the world must be individualistic and not holistic. Certain people owe money to certain other people, and it is precisely this fact that makes the borrowing as well as the taxing process important. For we might just as well say that taxes are unimportant for the same reason.[138]

Many "right-wing" opponents of public borrowing, on the other hand, have greatly exaggerated the dangers of the public debt and have raised persistent alarms about imminent "bankruptcy." It is obvious that the government cannot become "insolvent" like private individuals—for it can always obtain money by coercion, while private citizens cannot. Further, the periodic agitation that the government "reduce the public debt" generally forgets that—short of outright repudiation—the debt can be reduced only by *increasing,* at least for a time, the tax and/or inflation in society. Social utility can therefore not be enhanced by debt-reduction, *except* by the method of *repudiation*—the one way that the public debt can be lowered without a concomitant increase in fiscal coercion. Repudiation would also have the further merit (from the standpoint of the free market) of casting a pall on all future government credit, so that the government could no longer so easily divert savings to government use. It is therefore one of the most curious and inconsistent features of the history of politico-economic thought that it is precisely the "right-wingers," the presumed champions of the free market, who attack repudiation most strongly and who insist on as swift a payment of the public debt as possible.[139]

APPENDIX B: "COLLECTIVE GOODS" AND "EXTERNAL BENEFITS": TWO ARGUMENTS FOR GOVERNMENT ACTIVITY

One of the most important philosophical problems of recent centuries is whether ethics is a rational discipline, or instead a purely arbitrary, unscientific set of personal values. Whichever side one may take in this debate, it would certainly be generally agreed that economics—or praxeology—cannot *by itself* suffice to establish an ethical, or politico-ethical, doctrine. Economics *per se* is therefore a *wertfrei* science, which does not engage in ethical judgments. Yet, while economists will generally agree to this flat statement, it is certainly curious how much energy they have spent trying to justify—in some tortuous, presumably scientific, and *wertfrei* manner—various activities and expenditures of government. The consequence is the widespread smuggling of *unanalyzed,* undefended ethical judgments into a supposedly *wertfrei* system of economics.[140, 141]

Two favorite, seemingly scientific, justifications for government activity and enterprise are (*a*) what we might call the argument of "external benefits" and (*b*) the argument of "collective goods" or "collective wants." Stripped of seemingly scientific or quasi-mathematical trappings, the first argument reduces to the contention that A, B, and C do not seem to be able to do certain things without benefiting D, who may try to evade his "just share" of the payment. This and other "external benefit" arguments will be discussed shortly. The "collective goods" argument is, on its face, even more scientific; the economist simply asserts that some goods or services, by their very nature, must be supplied "collectively," and "therefore" government must supply them out of tax revenue.

This seemingly simple, existential statement, however, cloaks a good many unanalyzed politico-ethical assumptions. In the first place, even if there *were* "collective goods," it by no means follows *either* (1) that one agency must supply them or (2) that everyone in the collectivity *must* be forced to pay for them. In short, if X is a collective good, needed by most people in a certain community, and which can be supplied only to all, it by no means follows that every beneficiary must be forced to pay for the good, which, incidentally, he may not even want. In short, we are back squarely in the moral problem of external benefits, which we shall discuss below. The "collective goods" argument turns out, upon analysis, to reduce to the "external benefit" argument. Furthermore, even if only one agency must supply the good, it has not been proved that the *government,* rather than some voluntary agency, or even some private corporation, cannot supply that good.[142]

Secondly, the very concept of "collective goods" is a highly dubious one. How, first of all, can a "collective" want, think, or act? Only an individual exists, and can do these things. There is no existential referent of the "collective" that supposedly wants and then receives goods. Many attempts have been made, nevertheless, to salvage the concept of the "collective" good, to provide a seemingly ironclad, scientific justification for government operations. Molinari, for example, trying to establish defense as a collective good, asserted: "A police force serves every inhabitant of the district in which it acts, but the mere establishment of a bakery does not appease their hunger." But, on the contrary, there is no absolute necessity for a police force to defend *every* inhabitant of an area or, still more, to give each one the same *degree* of protection. Furthermore, an absolute pacifist, a believer in total nonviolence, living in the area, would *not* consider himself protected by, or receiving defense service from, the police. On the contrary, he would consider any police in his area a detriment to him. Hence, defense cannot be considered a "collective good" or "collective want." Similarly for such projects as dams, which cannot be simply assumed to benefit everyone in the area.[143]

Antonio De Viti De Marco defined "collective wants" as consisting of two categories: wants arising when an individual is not in isolation and wants connected with a conflict of interest. The first category, however, is so broad as to encompass most market products. There would be no point, for example, in putting on plays unless a certain number went to see them or in publishing newspapers without a certain wide market. Must all these industries therefore be nationalized and monopolized by the government? The second category is presumably meant to apply to defense. This, however, is incorrect. Defense, itself, does not reflect a conflict of interest, but a threat of *invasion,* against which defense is needed. Furthermore, it is hardly sensible to call "collective" that want which is precisely the *least* likely to be unanimous, since robbers will hardly desire it![144] Other economists write as if defense is necessarily collective because it is an immaterial service, whereas bread, autos, etc., are materially divisible and salable to individuals. But "immaterial" services to individuals abound in the market. Must concert-giving be monopolized by the State because its services are immaterial?

In recent years, Professor Samuelson has offered his own definition of "collective consumption goods," in a so-called "pure" theory of government expenditures. Collective consumption goods, according to Samuelson, are those "which all enjoy in common in the sense that each individual's consumption of such a good leads to no subtraction from any other individual's consumption of that good." For some reason, these are supposed to be the proper goods (or *at least* these) for government, rather than the free market, to provide.[145] Samuelson's category has been attacked with due severity. Professor Enke, for example, pointed out that most governmental services simply do not fit Samuelson's classification—including highways, libraries, judicial services, police, fire, hospitals, and military protection. In fact, we may go further and state that *no* goods would ever fit into Samuelson's category of "collective consumption goods." Margolis, for example, while critical of Samuelson, concedes the inclusion of national defense and lighthouses in this category. But "national defense" is surely not an absolute good with only one unit of supply. It consists of specific resources committed in certain definite and concrete ways—and these resources are necessarily scarce. A ring of defense bases around New York, for example, cuts down the amount possibly available around San Francisco. Furthermore, a lighthouse shines over a certain fixed area only. Not only does a ship within the area prevent others from entering the area at the same time, but also the construction of a lighthouse in one place limits its construction elsewhere. In fact, if a good is really technologically "collective" in Samuelson's sense, it is *not a good at all,* but a natural condition of human welfare, like air—superabundant to all, and therefore *unowned* by anyone. Indeed, it is not the *lighthouse,* but the *ocean itself*—when the lanes are not crowded—which is the "collective consumption good," and which *therefore* remains unowned. Obviously, neither government nor anyone else is normally needed to produce or allocate the ocean.[146]

Tiebout, conceding that there is no "pure" way to establish an optimum level for government expenditures, tries to salavage such a theory specifically for *local* government. Realizing that the taxing, and even voting, process precludes voluntary demonstration of consumer choice in the governmental field, he argues that decentralization and freedom of internal migration renders *local* government expenditures more or less optimal—as we can say that free market expenditures by firms are "optimal"—since the residents can move in and out as they please. Certainly, it is true that the consumer will be better off if he can move readily out of a high-tax, and into a low-tax, community. But this helps the consumer only to a degree; it does not solve the problem of government expenditures, which remains otherwise the same. There are, indeed, other factors than government entering into a man's choice of residence, and enough people may be attached to a certain geographical area, for one reason or another, to permit a great deal of government depredation before they move. Furthermore, a major problem is that the world's total land area is fixed, and that governments have universally pre-empted all the land and thus universally burden consumers.[147]

We come now to the problem of external benefits—the major justification for government activities expounded by economists.[148] Where individuals simply benefit themselves by their actions, many writers concede that the free market may be safely left unhampered. But men's actions may often, even inadvertently, benefit others. While one might think this a cause for rejoicing, critics charge that from this fact flow evils in abundance. A free exchange, where A and B mutually benefit, may be all very well, say these economists; but what if A does something voluntarily which benefits B as well as himself, but for which B pays nothing in exchange?

There are two general lines of attack on the free market, using external benefits as the point of criticism. Taken together, these arguments against the market and for governmental intervention or enterprise cancel each other out, but each must, in all fairness, be examined separately. The first type of criticism is to *attack A for not doing enough for B.* The benefactor is, in effect, denounced for taking his own selfish interests exclusively into account, and thereby neglecting the potential indirect recipient waiting silently in the wings.[149] The second line of attack is to *denounce B for accepting a benefit without paying A in return.* The recipient is denounced as an ingrate and a virtual thief for accepting the free gift. The free market, then, is accused of injustice and distortion by both groups of attackers: the first believes that the selfishness of man is such that A will not act enough in ways to benefit B; the second that B will receive too much "unearned increment" without paying for it. Either way, the call is for remedial State action; on the one hand, to use violence in order to force or induce A to act more in ways which will aid B; on the other, to force B to pay A for his gift.

Generally, these ethical views are clothed in the "scientific" opinion that, in these cases, free-market action is no longer optimal, but should be brought back into optimality by corrective State action. Such a view completely misconceives the way in which economic science asserts that free-market action is *ever* optimal. It is optimal, not from the standpoint of the personal ethical views of an economist, but from the standpoint of the free, voluntary actions of all participants and in satisfying the freely expressed needs of the consumers. Government interference, therefore, will necessarily and always move *away* from such an optimum.

It is amusing that while each line of attack is quite widespread, each can be rather successfully rebutted by using the essence of the *other* attack! Take, for example, the first—*the attack on the benefactor.* To denounce the benefactor and implicitly call for State punishment for insufficient good deeds is to advance a moral claim by the recipient upon the benefactor. We do not intend to argue ultimate values in this book. But it should be clearly understood that to adopt this position is to say that B is entitled peremptorily to call on A to do something to benefit him, and for which B does not pay anything in return. We do not have to go all the way with the second line of attack (on the "free rider"), but we can say perhaps that it is presumptuous of the free rider to assert his right to a post of majesty and command. For what the first line of attack asserts is the moral right of B to exact gifts from A, by force if necessary.

Compulsory thrift, or attacks on potential savers for not saving and investing enough, are examples of this line of attack. Another is an attack on the user of a natural resource that is being depleted. Anyone who uses such a resource at all, whatever the extent, "deprives" some future descendant of the use. "Conservationists," therefore, call for lower present use of such resources in favor of greater future use. Not only is this compulsory benefaction an example of the first line of attack, but, if this argument is adopted, logically no resource subject to depletion could *ever* be used at all. For when the future generation comes of age, *it too* faces a future generation. This entire line of argument is therefore a peculiarly absurd one.

The second line of attack is of the opposite form—a denunciation of the recipient of the "gift." The recipient is denounced as a "free rider," as a man who wickedly enjoys the "unearned increment" of the productive actions of others. This, too, is a curious line of attack. It is an argument which has cogency only when directed against the first line of attack, i.e., against the free rider *who wants compulsory free rides.* But here we have a situation where A's actions, taken purely because they benefit himself, *also* have the happy effect of benefiting someone else. Are we to be indignant because happiness is being diffused throughout society? Are we to be critical because more than one person benefits from someone's actions? After all, the free rider did not ask for his ride. He received it, unasked, as a boon because A benefits from his own action. To adopt the second line of attack is to call in the gendarmes to apply punishment because too many people in the society are happy. In short, am I to be taxed for enjoying the view of my neighbor's well-kept garden?[150]

One striking instance of this second line of attack is the nub of the Henry Georgist position: an attack on the "unearned increment" derived from a rise in the capital values of ground land. We have seen above that as the economy progresses, real land rents will rise with real wage rates, and the result will be increases in the real capital values of land. Growing capital structure, division of labor, and population tend to make site land relatively more scarce and hence cause the increase. The argument of the Georgists is that the landowner is not morally responsible for this rise, which comes about from events external to his landholding; yet he reaps the benefit. The landowner is therefore a free rider, and his "unearned increment" rightfully belongs to "society." Setting aside the problem of the reality of society and whether "it" can own anything, we have here a moral attack on a free-rider situation.

The difficulty with this argument is that it proves far too much. For which one of us would earn anything like our present real income were it not for external benefits that we derive from the actions of others? Specifically, the great modern accumulation of capital goods is an inheritance from all the net savings of our ancestors. Without them, we would, regardless of the quality of our own moral character, be living in a primitive jungle. The inheritance of money capital from our ancestors is, of course, simply inheritance of shares in this capital structure. We are all, therefore, free riders on the past. We are also free riders on the present, because we benefit from the continuing investment of our fellow men and from their specialized skills on the market. Certainly the vast bulk of our wages, if they could be so imputed, would be due to this heritage on which we are free riders.

The landowner has no more of an unearned increment than any one of us. Are all of us to suffer confiscation, therefore, and to be taxed for our happiness? And *who* then is to receive the loot? Our dead ancestors, who were our benefactors in investing the capital?[151]

An important case of external benefits is "external economies," which could be reaped by investment in certain industries, but which would not accrue as profit to the entrepreneurs. There is no need to dwell on the lengthy discussion in the literature on the actual range of such external economies, although they are apparently negligible. The suggestion has been persistently advanced that the government subsidize these investments so that "society" can reap the external economies. Such is the Pigou argument for subsidizing external economies, as well as the old and still dominant "infant industries" argument for a protective tariff.

The call for state subsidization of external economy investments amounts to a *third line* of attack on the free market, i.e., *that B, the potential beneficiaries, be forced to subsidize the benefactors A, so that the latter will produce the former's benefits.* This third line is the favorite argument of economists for such proposals as government-aided dams or reclamations (recipients taxed to pay for their benefits) or compulsory schooling (the taxpayers will eventually benefit from others' education), etc. The recipients are again bearing the onus of the policy; but here they are not criticized for free riding. They are now being "saved" from a situation in which they would not have obtained certain benefits. Since they would not have paid for them, it is difficult to understand exactly *what* they are being saved from. The third line of attack therefore agrees with the first that the free market does not, because of human selfishness, produce enough external-economy actions; but it joins the second line of attack in placing the cost of remedying the situation on the strangely unwilling recipients. If this subsidy takes place, it is obvious that the recipients are no longer free riders: indeed, they are simply being coerced into buying benefits for which, acting by free choice, they would not have paid.

The absurdity of the third approach may be revealed by pondering the question: Who benefits from the suggested policy? The benefactor A receives a subsidy, it is true. But it is often doubtful if he benefits, since he would otherwise have acted and invested profitably in some other direction. The State has simply compensated him for losses which he would have received and has adjusted the proceeds so that he receives the equivalent of an opportunity forgone. Therefore A, if a business firm, does not benefit. As for the recipients, they are being forced by the State to pay for benefits that they otherwise would not have purchased. How can we say that they "benefit"?

A standard reply is that the recipients "could not" have obtained the benefit even if they had wanted to buy it voluntarily. The first problem here is by what mysterious process the critics know that the recipients would have liked to purchase the "benefit." Our only way of knowing the content of preference scales is to see them revealed in concrete choices. Since the choice concretely was *not* to buy the benefit, there is no justification for outsiders to assert that B's preference scale was "really" different from what was revealed in his actions. Secondly, there is no reason why the prospective recipients *could* not have bought the benefit. In all cases a benefit produced can be sold on the market and earn its value product to consumers. The fact that producing the benefit would not be profitable to the investor signifies that the consumers do not value it as much as they value the uses of nonspecific factors in alternative lines of production. For costs to be higher than prospective selling price means that the nonspecific factors earn more in *other* channels of production. Furthermore, in possible cases where some consumers are not satisfied with the extent of the market production of some benefit, they are at perfect liberty to subsidize the investors *themselves.* Such a voluntary subsidy would be equivalent to paying a higher market price for the benefit and would reveal their willingness to pay that price. The fact that, in any case, such a subsidy has not emerged eliminates any justification for a coerced subsidy by the government. Rather than providing a benefit to the taxed "beneficiaries," in fact, the coerced subsidy inflicts a loss upon them, for they could have spent their funds themselves on goods and services of greater utility.[152]

Notes

NOTES TO CHAPTER 8

1. "One thing I miss . . . in discussion generally in the field, is any use of words recognizing that profit means profit *or loss* and is in fact as likely to be a loss as a gain." Frank H. Knight, "An Appraisal of Economic Change: Discussion," *American Economic Review, Papers and Proceedings,* May, 1954, p. 63. Professor Knight's great contributions to profit theory are in sharp contrast to his errors in capital and interest theory. See his famous work, *Risk, Uncertainty, and Profit* (3rd ed.; London: London School of Economics, 1940). Perhaps the best presentation of profit theory is in Ludwig von Mises, "Profit and Loss," in *Planning for Freedom* (South Holland, Ill.: Libertarian Press, 1952), pp. 108–51.
2. We may make such value judgments, of course, only to the extent that we believe it is "good" to correct maladjustments and to serve the consumers, and "bad" to create such maladjustments. These value judgments, therefore, are not at all praxeological truths, though most people would probably subscribe to them. Those who *prefer* maladjustments in serving consumers will adopt the opposite value judgments.
3. On all this, *see* Mises, "Profit and Loss," in *Planning for Freedom.* On the role of the fallacy of capital's automatically yielding profit in public utility regulation, *see* Arthur S. Dewing, *The Financial Policy of Corporations* (5th ed.; New York: Ronald Press, 1953), I, 308–53.
4. Mises, *Planning for Freedom,* p. 114.
5. Hayek, *Prices and Production,* pp. 48–49.
6. *See* Hayek, "The 'Paradox' of Saving" in *Profits, Interest, and Investment,* pp. 199–263.
7. This production structure diagram differs from our usual ones; it presents both the capital structure and the payment to owners of original factors as amalgamated in the same bar, to represent total investment at each stage. The steps in the diagram, then, represent the interest spreads to the capitalists (in rough, not exact, fashion).
8. Hayek, *Prices and Production,* pp. 75–76.
9. Of course, the productivity of a labor factor will differ from one task to another. No one disputes this; indeed, if this were not so, the factor would be *purely nonspecific,* and we have seen that this is an impossibility. "Specific" is here used to mean pure specificity for one production process.
10. See below for discussion of this point.
11. Historically, the advancing capitalist economy has coincided with an expanding money supply, so that we have rarely had an empirical illustration of the above "pure" process described in the text. We must remember that we have throughout been making the implicit assumption that

the "money relation"—the demand for, and particularly the supply of, money—remains unchanged. Effects of changes in this relation will be considered in chapter 11. The only relaxation of this assumption here is that the number of stages increases, and this tends to increase the demand for money to that extent.

12. The demand for money increases to the extent that each gold unit must "turn over" more times in the increased number of stages, thus tending to lower the "general level" of prices.
13. For a view of capitalized gains similar to the one presented here, *see* Roy F. Harrod, *Economic Essays* (New York: Harcourt, Brace & Co., 1952), pp. 198–205.
14. This is not the same as assuming an ERE, for in the ERE there are *no changes* to be foreseen.
15. The rise in general money prices, in monetary terms, is accounted for by the decreased demand for money as a result of the lower number of stages for the monetary unit to "turn over" in.
16. The definitions of the progressing and the retrogressing economy differ from those of Mises in *Human Action*. They are defined here as an increase or a decrease in capital in society, while Mises defines them as an increase or a decrease in total capital *per person* in the society. The present definitions focus on the analysis of saving and investment, population growth or decline being a very different phase of the subject. When we are making an historical "welfare" assessment of the conditions of the economy, however, the question of production *per capita* becomes important.
17. It is possible that the changes in investment were anticipated in the market. To the extent that an increase or a decrease was anticipated, the aggregate profits or losses will accrue in the form of a gain in capital value before the actual change in investment takes place. Losses arise during retrogression because previously employed processes have to be abandoned. The fact that the highest stages, already begun, have to be abandoned is an indication that the shift was not fully anticipated by the producers.
18. It is this assumption, coupled with a completely unjustifiable dichotomizing of "consumers' goods industries" and "capital goods industries" (whereas, in fact, there are *stages* of capital goods leading to consumers' goods, and not an arbitrary dichotomy) that is at the bottom of Nurkse's criticism of the structure of production analysis. *See* Ragnar Nurkse, "The Schematic Representation of the Structure of Production," *Review of Economic Studies,* II (1935).
19. The popular assumption now, in fact, is that a hidden hand somehow guarantees that capital will automatically increase continually, so that factor productivity will increase by "2–3% per year."
20. An illustration from modern times: "Austria was successful in pushing through policies which are popular all over the world. Austria has most impressive records in five lines: she increased public expenditures, she increased wages, she increased social benefits, she increased bank credits, she increased consumption. After all those achievements she was on the

verge of ruin." Fritz Machlup, "The Consumption of Capital in Austria," *Review of Economic Statistics* (1935), p. 19.

21. It is often assumed that only depreciation funds for durable capital goods are available for capital consumption. But this overlooks a very large part of capital—so-called "circulation capital," the less durable capital goods which pass quickly from one stage to another. As each stage receives funds from its sale of these or other goods, it is not necessary for the producer to continue to repurchase circulation capital. These funds too may be immediately spent on consumption. *See* Hayek, *Pure Theory of Capital,* pp. 47 ff., for a contrast between the correct and the fashionable approaches toward capital.
22. Frank H. Knight, "Professor Hayek and the Theory of Investment," *Economic Journal,* March, 1935, p. 85 n. *Also see* Knight, *Risk, Uncertainty, and Profit,* pp. xxxvii–xxxix.
23. Very few writers have realized this. *See* Hayek, "The 'Paradox' of Saving," in *Profits, Interest, and Investment,* pp. 214 ff., 253 ff.
24. Böhm-Bawerk, *Positive Theory of Capital,* p. 82.
25. Mises, *Human Action,* pp. 478–79.
26. *See* Hayek, *Pure Theory of Capital,* pp. 60 ff. Similarly, there are numerous long processes which are not productive at all or which are less productive than shorter processes. *These* longer processes will obviously not be chosen at all. In sum, while all new investment will be in longer processes, it certainly does not follow that all longer processes are more productive and therefore worthy of investment. For Böhm-Bawerk's strictures on this point, *see* Eugen von Böhm-Bawerk, *Further Essays on Capital and Interest,* in *Capital and Interest* (South Holland, Ill.: Libertarian Press, 1959), III, 2.
27. It should be clear that, as Mises lucidly put it, "originary [pure] interest is not a price determined on the market by the interplay of the demand for and the supply of capital or capital goods. Its height does not depend on the extent of this demand and supply. It is rather the rate of originary interest that determines both the demand for and the supply of capital and capital goods. It determines how much of the available supply of goods is to be devoted to consumption in the immediate future and how much to provision for remoter periods of the future." Mises, *Human Action,* pp. 523–24.
28. Eugen von Böhm-Bawerk, "The Positive Theory of Capital and Its Critics, Part III," *Quarterly Journal of Economics,* January, 1896, pp. 121–35. Also see *id., Further Essays, etc.,* pp. 31 ff.
29. Böhm-Bawerk, "The Positive Theory of Capital and Its Critics, Part III," *op. cit.,* pp. 128 ff.
30. Mises, *Human Action, op. cit.,* pp. 492 ff.
31. The futility of "Point 4" and "technical assistance" in furthering production in the backward countries should be evident from this discussion. As Böhm-Bawerk commented, in discussing advanced techniques: "There are always thousands of persons who know of the existence of the machines, who would be glad to secure the advantage of their use, but who

do not dispose of the capital necessary for their purchase." Böhm-Bawerk, "The Positive Theory of Capital and Its Critics, Part III," *op. cit.*, p. 127. Also see *id.*, *Further Essays, etc.*, pp. 4–10.

32. "It is frequently supposed that all the increases in the quantity of capital per head . . . must mean that some commodities will now be produced by longer processes than before. But so long as the processes used in different industries are of different lengths, this is by no means a necessary consequence. . . . If input is transferred from industries using shorter processes to industries using longer processes, there will be no change in the length of the period of production in any industry, nor any change in the methods of production of any particular commodity, but merely an increase in the periods for which particular units of input are invested. The significance of these changes in the investment periods of particular units of input will, however, be exactly the same as it would be if they were the consequence of a change in the length of particular processes of production." Hayek, *Pure Theory of Capital*, pp. 77–78. Also see *id.*, *Prices and Production*, p. 77, and Böhm-Bawerk, *Further Essays, etc.*, pp. 57–71.
33. *And* if there had been fewer land grants and other governmental subsidies to railroads! Thus, *see* E. Renshaw, "Utility Regulation: A Reexamination," *Journal of Business*, October, 1958, pp. 339–40.
34. "The fact that not every technological improvement is instantly applied in the whole field is not more conspicuous than the fact that not everyone throws away his old car or his old clothes as soon as a better car is on the market or new patterns become fashionable." Mises, *Human Action*, pp. 504 and 502–10. Specifically, the old equipment will continue in use as long as its operating costs are lower than the total costs of installing the new equipment. If, in addition, total costs (including replacement costs for wear and tear on capital goods) are greater for the old equipment, then the firm will gradually abandon old equipment as it wears out and will invest in the new technique. For an extensive discussion, *see* Hayek, *Pure Theory of Capital*, pp. 310–20.
35. "Technocrats" condemn the market for rewarding investments according to their (marginal) *value-productivity* instead of their (marginal) *physical productivity*. But we see here an excellent example of a technique more physically productive but less value-productive, and for a very good reason: that the given specific capital goods already produced lend an advantage to the old technique, so that "out-of-pocket" operating costs of the old technique are lower, until the equipment wears out, than total costs for the new project. Consumers are benefited by continuing the old techniques while they remain profitable, for then factors are spared for more valuable production elsewhere.
36. As will be seen below, actuarial risks can be "insured" against, but not the entrepreneurial uncertainty of the market.
37. It is evident that Mises' strictures in *Human Action*, p. 530, apply to the doctrine that the quantity of capital determines the pure rate of interest, and not to the present argument.

38. The loan market will diverge from the "natural" market to the extent that conditions for repayment of loans, etc., establish such differences. The two would be the same if the loans were clearly recognized as entrepreneurial, so that in cases where there was no deliberate fraud, the borrower would not be considered criminal if he did not repay the loan. However, if, as discussed in chapter 2 above, there are no bankruptcy laws and defaulting borrowers are considered criminal, then obviously the "safety" of all loans would increase in relation to "natural" investments, and the interest rates on loans would decline accordingly. In the free society, however, there would be nothing to prevent borrowers and lenders from agreeing, at the time the contract is made, that borrowers would *not* be held criminally responsible and that the loan would really be an entrepreneurial one. Or they could make any sort of arrangement in dividing gains or losses that they might choose.
39. Knight, *Risk, Uncertainty, and Profit,* pp. 212–55, especially p. 233.
40. Mises, *Human Action,* pp. 106–16, which also contains a discussion of the fallacies of the "calculus of probability" as applied to human action.
41. *See* Richard von Mises, *Probability, Statistics, and Truth* (2nd ed.; New York: Macmillan, 1957).
42. Ludwig von Mises, *Human Action,* p. 107.
43. *Ibid.,* p. 110.
44. There is a distinction between gambling and betting. Gambling refers to wagering on events of class probability, such as throws of dice, where there is no knowledge of the unique event. Betting refers to wagering on unique events about which both parties to the bet know something—such as a horse race or a Presidential election. In either case, however, the wagerer is creating a new risk or uncertainty.

NOTES TO CHAPTER 9

1. *Net* rents equal *gross* rents earned minus gross rents paid to owners of factors.
2. Its capital value will be positive, however, if people *expect* the land to earn rents in the near future.
3. "The last unit of product of any finite amount would . . . have to pay its corresponding rent. The only product obtained, in the strict theory of the case, without paying rent, would be one unit infinitesimally small—in plain Anglo-Saxon, would be nothing at all. No finite unit of product can be shown to be a no-rent unit." Frank A. Fetter, "The Passing of the Old Rent Concept," *Quarterly Journal of Economics,* May, 1901, p. 439.
4. The terms "marginal," "supramarginal," etc., are rather differently used here from the way they are used above. Instead of dealing with the supply and demand for a homogeneous good or factor, we are here referring to one *class* of factors, such as lands, and comparing different *qualities* of the various factors in that class. The near-zero-earning land is "marginal" because it is the one just barely put to use.

5. Here we shift the definition of progressing economy to mean increasing capital *per person,* so that we can contrast the effects of changes in the supply of one type of factor to changes in the supply of another.
6. There is, of course, no reason to assume that maximum real income per head is necessarily the best ethical ideal; for some, the ideal might be maximum real income plus maximum population. In a free society, parents are free to choose their own ethical principles in the matter.
7. Economics can say little else about population and its size. The inclusion of a corpus of "population theory" under economics instead of biology or psychology is the unfortunate result of the historical accident that the early economists were the first to delve into demographic problems.
8. The Lausanne way (of Walras and Pareto) of phrasing this distinction would be to say that, in the former case (when we are moving along the curve), we implicitly assumed that "(the supply of) tastes, techniques, and resources remains given in the economy." In the present case, we are considering a change in a resource (e.g., an increase in the supply of labor). We would amend this to say that only *tastes* and resources were considered given. As we saw in the previous section, techniques are not immediate determinants of production changes. The techniques must be put to use via saving and investment. In fact, we may deal with tastes and resources *alone,* provided that we include time preferences among the "tastes."
9. When an owner performs, and earns a return for, an essentially labor activity which he could *also* perform as an employee (e.g., the owner-manager), that return is an implicit wage. On definitions of "labor," *see* Spencer Heath, *Citadel, Market, and Altar* (Baltimore: Science of Society Foundation, 1957), pp. 235–36.
10. When we use the term "quality" here and in other parts of catallactic analysis, we are not employing it in some metaphysical sense or from some "higher" ethical point of view. We mean quality *as expressed by choice of the market,* in the form of a higher MVP and therefore a higher wage.
11. For an example of an interesting work on bargaining with unions based squarely on the false labor-management dichotomy, *see* Lee H. Hill and Charles R. Hook, Jr., *Management at the Bargaining Table* (New York: McGraw-Hill, 1945). On foremen's unions, *see* Theodore R. Iserman, *Industrial Peace and the Wagner Act* (New York: McGraw-Hill, 1947), pp. 49–58.
12. This "rule" by consumers' valuations holds in so far as entrepreneurs and owners of factors aim at maximum money income. To the extent that they abstain from higher money income to pursue *nonmonetary ends* (e.g., looking at one's untilled land or enjoying leisure), the producers' own valuations will be determining. From the general praxeological point of view, these producers are to that extent acting as *consumers.* Therefore, the full rule of consumers' value scales would hold even here. However, for purposes of catallactic market analysis, it may be

convenient to separate man as a producer from man as a consumer, even though, considered in his entirety, the same man performs both functions. In that event, we may say that to the extent that nonmonetary goals enter, not consumers' values are determining, but the values of *all individuals* in society. For further discussion of this question and of "consumer sovereignty," see chapter 10 below.

13. In the free society, as we have indicated above, the site could not originally become the property of anyone until it had been "used" in some way, such as being cleared, cultivated, etc. There need be no subsequent use, however, until rents can be obtained.
14. There will be such a backward supply curve if the marginal utility of money falls rapidly enough and the marginal disutility of leisure forgone rises rapidly enough as units of labor are sold for higher prices in money.
15. It will be noted that we have avoided using the very fashionable term "model" to apply to the analyses in this book. The term "model" is an example of an unfortunate bias in favor of the methodology of physics and engineering, as applied to the sciences of human action. The constructs are imaginary because their various elements never coexist in reality; yet they are necessary in order to draw out, by deductive reasoning and *ceteris paribus* assumptions, the tendencies and causal relations of the real world. The "model" of engineering, on the other hand, is a mechanical construction in miniature, *all parts of which* can and must coexist in reality. The engineering model portrays in itself all the elements and the relations among them that will coexist in reality. For this distinction between an imaginary construct and a model, the writer is indebted to Professor Ludwig von Mises.
16. For some philosophical discussions of human variation, *see* Harper, *Liberty*, pp. 61–83, 135–41; Roger J. Williams, *Free and Unequal* (Austin, Tex.: University of Texas Press, 1953): George Harris, *Inequality and Progress* (Boston: Houghton Mifflin, 1898); Herbert Spencer, *Social Statics* (New York: D. Appleton & Co., 1890), pp. 474-82; A. H. Hobbs, *The Claims of Sociology* (Harrisburg, Pa.: The Stackpole Co., 1951), pp. 23–64; Hobbs, *Social Problems and Scientism* (Harrisburg, Pa.: The Stackpole Co., 1953), pp. 254–304.
17. Cf. Van Sickle and Rogge, *op. cit.*, pp. 178–81.
18. For a treatment of wage rates and geography, see the section below on "The Economics of Location and Spatial Relations."
19. It should be understood throughout that when we refer to increases in wage rates or ground rents in the expanding economy, we are referring to real, and not necessarily to money, wage rates or ground rents.
20. This assumes, of course, that there is no offsetting *decline* in capital elsewhere. If there is, then there will be no *general* rise in wages.
21. For a discussion of these problems, *see* Mises, *Human Action*, pp. 598–600.
22. Capital goods will remain unemployed because of previous entrepreneurial error, i.e., investing in the wrong type of capital goods.

23. *See* Mises, *Human Action,* pp. 595–98. As Mises concludes, "Unemployment in the unhampered market is always voluntary." Particularly recommended is Mises' critique of the theory of "frictional unemployment."
24. Economics does not "assume mobility of labor." It simply analyzes the consequences of a laborer's decision to be "mobile" or "immobile," the latter amounting to a voluntary choice of at least temporary unemployment.
25. The "idleness" referred to here is catallactic, and not necessarily total. In other words, it means that a man does not seek to sell his labor services for money and therefore does not enter the societal labor market. He might well be very "busy" working at hobbies, etc.
26. Hayek, *Prices and Production,* pp. 91–93.
27. Cf. Fred R. Fairchild and Thomas J. Shelly, *Understanding Our Free Economy* (New York: D. Van Nostrand, 1952), pp. 478–81.
28. Hence, when the economist considers only the single firm (as in recent years), he goes completely astray by ignoring the generality of economic interrelations. To analyze means-ends relations logically, as economics does, requires taking all relations into account. Failure to do so, either by treating the single firm only or by treating unreal holistic aggregates or by taking refuge in the irrelevant mathematics of the Lausanne "general equilibrium" school, is equivalent to abandoning economics.
29. Many beginning students come away with the impression that economics consists of an indigestible brew of "cost curves" to be memorized by rote and drawn neatly on the blackboard.
30. E. T. Weiler, *The Economic System* (New York: Macmillan, 1952), pp. 141–61; Stigler, *op. cit.,* pp. 126 ff.
31. Stigler, *op. cit.,* p. 126.
32. Robbins points out that the length of a period of productive activity depends upon the expectations of entrepreneurs concerning the permanence of a change and the technical obstacles to a change. Robbins, "Remarks, etc.," *op cit.,* pp. 17–18.
33. For a critique of cost-curve theory, see the articles by Robbins, Thirlby, and Gabor and Pearce cited above, especially Gabor and Pearce, "A New Approach, etc.," *loc. cit. Also see* Milton Friedman, "Survey of the Empirical Evidence on Economies of Scale: Comment" in *Business Concentration and Price Policy* (Princeton: National Bureau of Economic Research, 1955), pp. 230–38; Armen Alchian, "Costs and Outputs" in *The Allocation of Economic Resources* (Stanford: Stanford University Press, 1959), pp. 23–40; F. A. Hayek, "Unions, Inflation, and Prices" in Philip D. Bradley, ed., *The Public Stake in Union Power* (Charlottesville, Va.: University of Virginia Press, 1959), pp. 55 f.; Hayek, *Pure Theory of Capital,* pp. 14, 20–21; Harrod, "Theory of Imperfect Competition Revised" in *Economic Essays,* pp. 139–87; G. Warren Nutter, "Competition: Direct and Devious," *American Economic Review, Papers and Proceedings,* May, 1954, pp. 69 ff.; Scott, *op. cit.,* p. 5.
34. This law follows from the natural law that every quantitatively observable cause-effect relation can be duplicated. For example, if $x + 2y + 3z$

are necessary and sufficient to form 1*p*, *another* set will form another *p*, so that $2x + 4y + 6z$ will yield 2*p*.

35. See chapter 10 for more on the theory of pure competition.
36. For example, suppose that 1,000 gold ounces invested in factors yield 100 units of product and that 1,100 ounces yield 101 units. All the points in the gap between 1,000 and 1,100 will yield no more than 100 units. The excess of investment over 1,000 and under 1,100 ounces is clearly sheer waste, and no businessman will invest within the gap. Instead, investments will be made at such trough points for average cost as 1,000 and 1,100.
37. Stigler, *Theory of Price,* pp. 132 ff.
38. We are not discussing the fact that the railroad could, of course, cut down or increase the mileage of its track by including less or more geographic area in its service. The example assumes a given geographic area in which the railroad operates.
39. *See* Mises, *Human Action,* pp. 338–40. This is the unrealistic condition implicitly assumed by textbook "cost curves."
40. *Ibid.,* p. 340.
41. Stigler, *Theory of Price,* p. 136.
42. It is particularly important not to limit possible efficiencies from large-scale production to narrow technological factors such as the "size of the plant." There are also efficiencies derived from the *organization of a firm* owning several plants—e.g., management utilization, specialization, efficiency of large-scale purchasing and selling. research expenditures, etc. Cf. George G. Hagedorn, *Studies on Concentration* (New York: National Association of Manufacturers, 1951), pp. 14 ff.
43. *See* Friedman, *loc. cit.*
44. For a good, largely empirical, study of size of firm, *see* George G. Hagedorn, *Business Size and the Public Interest* (New York: National Association of Manufacturers, 1949). Also see *id., Studies on Concentration,* and John G. McLean and Robert W. Haigh, "How Business Corporations Grow," *Harvard Business Review,* Nov.–Dec., 1954, pp. 81–93.
45. Plans are relevant, not only in the ERE, but also to all decisions on maintenance or replacement. as well as additions to capital goods when they wear out or fall into disrepair.
46. It is costless only if no rise in the price of the good is foreseen for the near future. If it is, then there will arise the opportunity cost of forgoing a higher price. Hence, if there is no hope of a higher price, the businessman will sell, however low the price (adjusting for the costs of selling minus the costs of continued storage).
47. Conventional "cost-curve" analysis depicts average cost and demand curves as tangential in the ERE—i.e., that price = average cost. *But* (aside from the unreality of assuming smooth curves rather than discontinuous angles), interest return—as well as return to the owner's decision-making ability—will accrue to the entrepreneurs even in the ERE. Hence, no such tangency can arise. See chapter 10 below for the implications of this revision for "monopolistic competition" theory.

48. For further readings on cost, *see* G. F. Thirlby, "The Marginal Cost Controversy: A Note on Mr. Coase's Model," *Economica,* February, 1947, pp. 48–53; F. A. Fetter's classic "The Passing of the Old Rent Concept," *loc. cit.;* R. H. Coase, "Business Organization and the Accountant," *The Accountant,* October 1–November 26, 1938; and *id.,* "Full Costs, Cost Changes, and Prices" in *Business Concentration and Price Policy,* pp. 392–94; John E. Hodges, "Some Economic Implications of Cost-Plus Pricing," *Southwestern Social Science Quarterly,* December, 1954, pp. 225–34; I. F. Pearce, "A Study in Price Policy," *Economica,* May, 1956, pp. 114–27; I. F. Pearce and Lloyd R. Amey, "Price Policy with a Branded Product," *Review of Economic Studies,* Vol. XXIV (1956–57), No. 1, pp. 49–60; James S. Earley, "Recent Developments in Cost Accounting and the 'Marginal Analysis,'" *Journal of Political Economy,* June, 1955, pp. 227–42; and David Green, Jr., "A Moral to the Direct-Costing Controversy?" *Journal of Business,* July, 1960, pp. 218–26.
49. This implicit wage will equal the DMVP of the owner's managerial services, which will tend to equal the "opportunity wage forgone" that he could be earning as a manager elsewhere.
50. In one of those extremely fertile but neglected hints of his, Böhm-Bawerk wrote: "But even where he [the businessman] does not personally take part in the carrying out of the production, he yet contributes a certain amount of personal trouble in the shape of intellectual superintendence—say, in planning the business, or, at the least, in the act of will by which he devotes his means of production to a definite undertaking." Böhm-Bawerk, *Capital and Interest,* p. 8.
51. For an interesting contribution to the theory of business income, though not coinciding with the one presented here, *see* Harrod, "Theory of Profit" in *Economic Essays,* pp. 190–95. *Also see* Friedman, *loc. cit.*
52. Since the scope of their business property and decisions is relatively negligible compared to their labor services, we may neglect their decision rents here.
53. It is a managerial wage, even though the only employee may be the owner himself. It may seem strange to classify a domestic servant as "self-employed," but actually he is no different from a doctor or a lawyer to the extent that the latter sell their services to *consumers* rather than to capitalists.
54. Another reason why an economy of producers' co-operatives could not calculate is that every original factor would be tied indissolubly to a specific line of production. There can be no calculation where all factors are purely specific.
55. Vertical integration, we might note, tends to reduce the demand for money (to "turn over" at various stages) and thereby to lower the purchasing power of the monetary unit. For the effect of vertical integration on the analysis of investment and the production structure, *see* Hayek, *Prices and Production,* pp. 62–68.
56. The implicit price, or opportunity cost of selling to oneself, might be less than the existing market price, since the entry of the Jones Com-

pany on the market might have lowered the price of the good, say to 102 ounces. There would be no way at all, however, to estimate the implicit price if there were no external market and external price.

57. On the size of a firm, see the challenging article by R. H. Coase, "The Nature of the Firm" in George J. Stigler and Kenneth E. Boulding, eds., *Readings in Price Theory* (Chicago: R. D. Irwin, 1952), pp. 331–51. In an illuminating passage Coase pointed out that State "planning is imposed on industry, while firms arise voluntarily because they represent a more efficient method of organizing production. In a competitive system there is an 'optimum' amount of planning." *Ibid.,* p. 335 n.
58. Capital goods are stressed here because they are the product for which the calculability problem becomes important. Consumers' goods *per se* are no problem, since there are always many consumers buying goods, and therefore consumers' goods will always have a market.
59. See the classic presentation of the position in Ludwig von Mises, "Economic Calculation in the Socialist Commonwealth," reprinted in F. A. Hayek, ed., *Collectivist Economic Planning* (London: George Routledge & Sons, 1935), pp. 87–130. *Also see* in the Hayek volume the other essays by Hayek, Pierson, and Halm. Mises continued his argument in *Socialism* (2nd ed.; New Haven: Yale University Press, 1951), pp. 135–63, and refutes more recent criticisms in his *Human Action,* pp. 694–711. Aside from these works, the best book on the subject of economic calculation under socialism is Trygve J. B. Hoff, *Economic Calculation in the Socialist Society* (London: William Hodge, 1949). *Also see* F. A. Hayek, "Socialist Calculation III, the Competitive 'Solution' " in *Individualism and the Economic Order,* pp. 181–208, and Henry Hazlitt's remarkable essay in fictional form, *The Great Idea* (New York: Appleton-Century-Crofts, 1951).
60. It is remarkable that so many antisocialist writers have never become aware of this critical point.
61. Far from being refuted, Mises had already disposed of this argument in his original article. See *Collectivist Economic Planning,* p. 109. Further, Barone's article was written in 1908, twelve years before Mises'. A careful perusal of Mises' original article, in fact, reveals that he there disposed of almost all the alleged "solutions" which decades later were brought forth as "new" attempts to refute his argument.
62. Part of the confusion stems from an unfortunate position taken by two followers of Mises in this debate—Hayek and Robbins. They argued that a socialist government could not calculate because it simply could not compute the millions of equations that would be necessary. This left them open to the obvious retort that now, with high-speed computers available to the government, this practical objection is no longer relevant. In reality, the job of rational calculation has nothing to do with computing equations. Nobody has to worry about "equations" in real life except mathematical economists. Cf. Lionel Robbins, *The Great Depression* (New York: Macmillan, 1934), p. 151, and Hayek in *Collectivist Economic Planning,* pp. 212 f.

63. *See* Gottfried von Haberler, *The Theory of International Trade* (London: William Hodge, 1936), pp. 3–8.
64. "The fact that the production of raw materials and foodstuffs cannot be centralized and forces people to disperse over the various parts of the earth's surface enjoins also upon the processing industries a certain degree of decentralization. It makes it necessary to consider the problems of transportation as a particular factor of production costs. The costs of transportation must be weighed against the economies to be expected from more thoroughgoing specialization." Mises, *Human Action,* pp. 341–42.
65. *See* Mises, *Human Action,* pp. 622–24.
66. For the weighty implications of this "Misesian" analysis for the theory of "international trade," cf. not only Mises' *Theory of Money and Credit,* but also the excellent, though neglected, Chi-Yuen Wu, *An Outline of International Price Theories* (London: George Routledge & Sons, 1939), pp. 115, 233–35, and *passim.*
67. This error lies at the root of attacks on the "basing-point system" of pricing in some industries. The critics assume that *uniform pricing* of a good means uniform pricing *at the various mills,* whereas it really implies uniform "delivered prices" of the various firms at any given *consumer center.* On the basing-point question, see also the analysis in *United States Steel Corporation T. N. E. C. Papers* (New York: United States Steel Corporation, 1940), II, 102–35.
68. For purposes of simplification, we have omitted the consumers in Rochester, Detroit, and elsewhere, but the same law applies to them. For consumers in Rochester and Detroit, in equilibrium:

$$\begin{aligned} P(C_r) \text{ in Rochester} &= P(C_d) \text{ in Rochester, and} \\ P(C_r) \text{ in Detroit} &= P(C_d) \text{ in Detroit, etc.} \end{aligned}$$

69. For a critique of some aspects of this separation in the "new welfare economics," *see* B. R. Rairikar, "Welfare Economics and Welfare Criteria," *Indian Journal of Economics,* July, 1953, pp. 1–15.
70. The last few years have seen signs of a revival of "Austrian" production theory—the tradition in which these chapters have been written. In addition to works cited above, *see* Ludwig M. Lachmann, *Capital and Its Structure* (London: London School of Economics, 1956) and *id.,* "Mrs. Robinson on the Accumulation of Capital," *South African Journal of Economics,* June, 1958, pp. 87–100. Robert Dorfman's "Waiting and the Period of Production," *Quarterly Journal of Economics,* August, 1959, pp. 351–72, and his "A Graphical Exposition of Böhm-Bawerk's Interest Theory," *Review of Economic Studies,* February, 1959, pp. 153–58, are interesting chiefly as a groping attempt by a leading mathematical economist to return to the Austrian road. For an incisive critique of Dorfman, *see* Egon Neuberger, "Waiting and the Period of Production: Comment," *Quarterly Journal of Economics,* February, 1960, pp. 150–53.

NOTES TO CHAPTER 10

1. This applies not only to specific types of goods, but also to the allocation between present and future goods, in accordance with the time preferences of the consumers.
2. Of course, we may formally salvage the concept of "consumers' sovereignty" by asserting that all these psychic elements and evaluations constitute "consumption" and that the concept therefore still has validity. However, it would seem to be more appropriate in the *catallactic context of the market* (which is the area here under discussion) to reserve "consumption" to mean the enjoyment of *exchangeable goods*. Naturally, in the final sense, everyone is an ultimate consumer—both of exchangeable and of nonexchangeable goods. However, the market deals only in exchangeable goods (by definition), and when we separate the consumer and the producer in terms of the market, we distinguish the demanding, as compared to the supplying, of exchangeable goods. It is more appropriate, then, not to consider a nonexchangeable good as an object of consumption in this particular context. This is important in order to discuss the contention that individual producers are somehow subject to the sovereign rule of *other* individuals—the "consumers."
3. W. H. Hutt, "The Concept of Consumers' Sovereignty," *Economic Journal,* March, 1940, pp. 66–77. Hutt originated the term in an article in 1934. For an interesting use of a similar concept, cf. Charles Coquelin, "Political Economy" in *Lalor's Cyclopedia,* III, 222–23.
4. To be consistent, currently fashionable theory would have to accuse Crusoe and Friday of being vicious "bilateral monopolists," busily charging each other "monopoly prices" and therefore ripe for State intervention!
5. See chapter 8, p. 469 above.
6. In the words of Professor Mises: "That the production of a commodity *p* is not larger than it really is, is due to the fact that the complementary factors of production required for an expansion were employed for the production of other commodities. . . . Neither did the producers of *p* intentionally restrict the production of *p*. Every entrepreneur's capital is limited; he employs it for those projects which, he expects, will, by filling the most urgent demand of the public, yield the highest profit.

   "An entrepreneur at whose disposal are 100 units of capital employs, for instance, 50 units for the production of *p* and 50 units for the production of *q*. If both lines are profitable, it is odd to blame him for not having employed more, e.g., 75 units, for the production of *p*. He could increase the production of *p* only by curtailing correspondingly the production of *q*. But with regard to *q* the same fault could be found by the grumblers. If one blames the entrepreneur for not having produced more *p*, one must blame him also for not having produced more *q*. This means: one blames the entrepreneur for the fact that there is a scarcity of the factors of production and that the earth is not a land of Cockaigne." Mises, *Planning for Freedom,* pp. 115–16.

7. *Ibid.,* p. 115.
8. Much error would have been avoided if economists had heeded the words of Arthur Latham Perry: "Every man who puts forth an effort to satisfy the desire of another, with the expectation of a return, is . . . a Producer. The Latin word *producere* means *to expose anything to sale.* . . . We must rid ourselves at the outset of the notion . . . that it is only to be applied to forms of *matter,* that it means . . . to *transform* something only. . . . The fundamental meaning of the root-word, both in Latin and in English, is *effort with reference to a sale.* A product is a service ready to be rendered. A producer is any person who gets something ready to sell and sells it. . . ." Perry, *op. cit.,* pp. 165–66.
9. R. H. Coase, in an illuminating article, has pointed out that the extent to which transactions take place *within* a firm or *between* firms is dependent on the balancing of the necessary costs of using the price mechanism as against the costs of organizing a structure of production within a firm. Coase, "The Nature of the Firm," *loc. cit.*
10. This spurious distinction was brought into wide currency by Thorstein Veblen and continued in the happily short-lived "technocracy" movement of the early 1930's. According to his biographer, this distinction was the keynote of all Veblen's writings. Cf. Joseph Dorfman, *The Economic Mind in American Civilization* (New York: Viking Press, 1949), III, 438 ff.
11. On the "orthodox" neglect of cost limitations, *see* Robbins, "Remarks, etc.," *loc. cit.*
12. Cf. Mises, *Human Action,* p. 367.
13. As Professor Benham states: "Firms which have produced a relatively large share of output in the past will demand the same share in the future. Firms which are expanding—owing, for example, to an unusually efficient management—will demand a larger share than they obtained in the past. Firms with a greater 'capacity' for producing, as measured by the size of their . . . plant will demand a correspondingly greater share." Benham, *op. cit.,* p. 232. On the difficulties faced by cartels, *see also* Bjarke Fog, "How Are Cartel Prices Determined?" *Journal of Industrial Economics,* November, 1956, pp. 16–23; Donald Dewey, *Monopoly in Economics and Law* (Chicago: Rand McNally, 1959), pp. 14–24; and Wieser, *Social Economics,* p. 225.
14. For illustrations of this instability in the history of cartels, *see* Fairchild, Furniss, and Buck, *Elementary Economics,* II, 54–55; Charles Norman Fay, *Too Much Government, Too Much Taxation* (New York: Doubleday, Page, 1923) p. 41, and *Big Business and Government* (New York: Doubleday, Page, 1912); A. D. H. Kaplan, *Big Enterprise in a Competitive System* (Washington: Brookings Institute, 1954), pp. 11–12.
15. These terms will be explained below.

16. Clearly, the very term "equal" is unusable here. What does it mean to say that lawyer Jones' ability is "equal" to teacher Smith's?
17. From his Address to the Civic Federation Conference on Trusts, held in Chicago, September 13–16, 1899, *Chicago Conference on Trusts* (Chicago, 1900), pp. 253–54, reprinted in Benjamin R. Tucker, *Individual Liberty* (New York: Vanguard Press, 1926), pp. 248–57. Said a lawyer at the conference: "The control of prices can be brought about permanently only by such a superiority in the methods of manufacture as will successfully defy competition. Any price established by a combination which enables competitors to make a reasonable profit will soon encourage such competition as will reduce the price." Azel F. Hatch, *Chicago Conference,* p. 70. See also the excellent article by A. Leo Weil, *ibid.,* pp. 77–96; and W. P. Potter, *ibid.,* pp. 299–305; F. B. Thurber, *ibid.,* pp. 124–36; Horatio W. Seymour, *ibid.,* pp. 188–93; J. Sterling Morton, *ibid.,* pp. 225–230.
18. Does our discussion imply, as Dorfman has charged (J. Dorfman, *op. cit.,* III, 247), that "whatever is, is right"? We cannot enter into a discussion of the relation of economics to ethics at this point, but we can state briefly that our answer, pertaining to the free market, is a qualified Yes. Specifically, our statement would be: *Given the ends* on the value scales of individuals, as revealed by their real actions, the maximum satisfaction of those ends for every person is achieved only on the free market. Whether individuals have the "proper" ends or not is another question entirely and cannot be decided by economics.
19. If all the factors and resources are absolutely *controlled* by the State, it makes little difference if, legally, the State *owns* these resources. For ownership connotes control, and if the nominal owner is coercively deprived of control, it is the controller who is the real owner of the resource.
20. The only author, to our knowledge, that looks forward to One (voluntary) Big Cartel as a potential ideal is Heath, *op. cit.,* pp. 184–87.
21. Cf. Mises, *Human Action,* p. 592.
22. The same confusion exists in the laws concerning monopoly. Despite constitutional warnings against vagueness, the Sherman Anti-Trust Act outlaws "monopolizing" actions without once defining the concept. To this day there has been no clear legislative decision concerning what constitutes illegal monopolistic action.
23. We are, of course, not considering here particular uncertainties of agriculture resulting from climate, etc.
24. For further discussion, *see* Murray N. Rothbard, "The Bogey of Administered Prices," *The Freeman,* September, 1959, pp. 39–41.
25. On the contrary, the consumers control Macy's to the extent that the store desires monetary income. Cf. John W. Scoville and Noel Sargent, eds., *Fact and Fancy in the T. N. E. C. Monographs* (New York: National Association of Manufacturers, 1942), p. 312.
26. One reason often given for ascribing "control over price" to Ford and not the small wheat grower is that Ford is so large that his actions affect the market price of his product, while the farmer is so small that

his actions do not affect the price. On this, see the critique below of "monopolistic competition" theories.

27. Economists have often charged, for example, that consumers who will pay a higher price for the same good at a store with a more pleasant atmosphere are acting "irrationally." Actually, they are by no means doing so, since consumers are buying not just a physical can of beans, but a can of beans sold in a certain store by certain clerks, and these factors may (or may not) make a difference to them. Businessmen are far less motivated by such "nonphysical" considerations (although good will affects their purchases too), *not* because they are "more rational" than consumers, but because they are not concerned, as consumers are, with their *own* value scales in deciding their purchases. As we have seen above, businessmen are generally motivated purely by the expected revenue that goods will bring on the market. For an excellent treatment of the definition of "homogeneous product," *see* G. Warren Nutter, "The Plateau Demand Curve and Utility Theory," *Journal of Political Economy,* December, 1955, pp. 526–28. *Also see* Alex Hunter, "Product Differentiation and Welfare Economics," *Quarterly Journal of Economics,* November, 1955, pp. 533–52.

28. Professor Lawrence Abbott, in one of the outstanding theoretical works of recent years, demonstrates also that as civilization and the economy advance, products will become more and more differentiated and less and less homogeneous. For one thing, greater differentiation occurs at the consumer than at the producer level, and the expanding economy takes over an increasing proportion of goods once made by the consumer himself and therefore supplies more finished goods than raw materials to the consumer than formerly (bread rather than flour, sweaters rather than wool yarn, etc.). Thus, there is greater opportunity for differentiation.

    Furthermore, to the familiar charge that business advertising tends to create differentiation in the consumer's mind that is not "really" there, Abbott replies incisively that the *reverse* is more likely to be true and that advancing civilization increases the consumer's perception and discrimination of differences of which he was previously ignorant. Writes Abbott: ". . . as man becomes more civilized, he develops greater powers of perception with regard to quality differences. Subjective homogeneity may exist even when objective homogeneity does not, due to the inability or unwillingness of buyers to perceive differences between almost identical products and discriminate between them. . . . As a society matures and education improves, people learn to develop more acute powers of discrimination. Their wants become more detailed. They begin . . . to develop a preference, say, not simply for white wine, but for 1948 Chablis. . . . People generally tend to underestimate the significance of apparently trivial differences in fields in which they are not expert. An unmusical person may be unwilling to concede that there is any difference in tone between a Steinway and a Chickering piano, being unable himself to detect it. A nongolfer is more likely than a habitual player to believe that all brands of golf balls are virtually alike." Lawrence Abbott, *Quality and Competition* (New York: Columbia University Press, 1955), pp. 18–19, and chap. I. Also see *ibid.,* pp. 45–46 and Edward H. Chamberlin, "Product Heterogeneity and Public Policy" in *Towards a More General Theory of Value* (New York: Oxford University Press, 1957), p. 96.

29. Oddly, despite the reams of literature on monopolies, very few economists have bothered to *define* monopoly, and these problems have therefore been overlooked. Mrs. Robinson, in the beginning of her famous *Economics of Imperfect Competition,* saw the difficulty and then evaded the issue throughout the rest of the book. She concedes that under careful analysis either a monopoly would be defined as every producer's control over his own product or monopoly could simply not exist on the free market at all. For competition exists among all products for the consumer's dollar, while very few articles are rigorously homogeneous. Mrs. Robinson then tries to evade the issue by falling back on "common sense" and defining monopoly as existing where there is a "marked gap" between the product and other substitutes the consumer may buy. But this will not do. Economics, in the first place, can establish no quantitative laws, so that there is nothing we can say about sizes of gaps. When does the gap become "marked"? Secondly, even if such "laws" were meaningful, there would be no way to measure the cross-elasticities of demands, the elasticity of substitution between the products, etc. These elasticities of substitution are changing all the time and could not be measured successfully even if they all remained constant, since supply conditions are always changing. No laboratory exists where all economic factors may be held fixed. After this point in her discussion, Mrs. Robinson practically forgets all about heterogeneity of product. Joan Robinson, *Economics of Imperfect Competition* (London: Macmillan, 1933), pp. 4–6. Also cf. Hunter, *op. cit.,* pp. 547 ff.
30. Quoted in Richard T. Ely and others, *Outlines of Economics* (3rd ed.; New York: Macmillan, 1917), pp. 190–91. Blackstone gave almost the same definition and called monopoly a "license or privilege allowed by the king." *Also see* A. Leo Weil, *Chicago Conference,* p. 86.
31. The onrush of monopoly grants by Queen Elizabeth I and Charles I provoked resistance from even the Crown's subservient judges, and, in 1624, Parliament declared that "all monopolies are altogether contrary to the laws of this realm and are and shall be void." This antimonopoly spirit was deeply ingrained in America, and the original Maryland constitution declared that monopolies were "odious" and "contrary to . . . principles of commerce." Ely, *op. cit.,* pp. 191–92. *Also see* Francis A. Walker, *Political Economy* (New York: Henry Holt & Co., 1911), pp. 483–84.
32. Francis Wayland, *The Elements of Political Economy* (Boston: Gould & Lincoln, 1854), p. 116. Cf. this later definition by Arthur Latham Perry: "A monopoly, as the derivation of the word implies, is a restriction imposed by a government upon the sale of certain services." Perry, *op. cit.,* p. 190. In recent years this definition has all but died out. A rare current example is: "Monopoly exists when government by

its coercive power limits to a particular person or organization, or combination of them, the right to sell particular goods or services . . . It is an infringement of the right to make a living." Heath, *op. cit.*, p. 237.

33. As Weil stated: "Monopolies cannot be created by association or agreement. We now have no letters patent giving exclusive right. . . . It is therefore wholly unjustifiable to use the term monopoly as applied to the effects of industrial consolidation." Weil, *Chicago Conference,* pp. 86 f.
34. For example, Edward H. Chamberlin, *Theory of Monopolistic Competition* (7th ed.; Cambridge: Harvard University Press, 1956), pp. 57 ff., 270 ff.
35. It might be objected that these concepts are vague and give rise to problems. Problems do arise, but they are not insuperable. Thus, if one man is named Joseph Williams, does this preclude anyone else from having the same name, and is any future Joseph Williams to be considered a criminal? The answer is clearly: No, so long as there is no attempt by one to impersonate the other. In short, it is not so much the name *per se* which an individual owns, but the name as an affiliate of his person.
36. For clear expositions of the theory of monopoly price, *see* Mises, *Socialism,* pp. 385–92, and *Human Action,* pp. 278, 354–84; Menger, *op. cit.,* pp. 207–25; Fetter, *Economic Principles,* pp. 73–85, 381–85; Harry Gunnison Brown, "Competitive and Monopolistic Price-Making," *Quarterly Journal of Economics,* XXII (1908), 626–39; and Wieser, *Social Economics,* pp. 204, 211–12. In this particular case, "neoclassical" includes "Austrian."
37. Mises, *Human Action,* p. 278.
38. Thus: "The mere existence of monopoly does not mean anything. The publisher of a copyright book is a monopolist. But he may not be able to sell a single copy, no matter how low the price he asks. Not every price at which a monopolist sells a monopolized commodity is a monopoly price. Monopoly prices are only prices at which it is more advantageous for the monopolist to restrict the total amount to be sold than to expand sales to the limit which a competitive market would allow." *Ibid.,* p. 356.
39. Here we abstract from monetary expense or "money cost" considerations. When the producer is considering sale of *already produced* stock, such past monetary expenses are completely irrelevant. When he is considering present and future production for future sale, present money-cost considerations become important, and the producer strives for maximum *net* returns. At any rate, some A′ point will be set, whatever the actual configuration of money costs, unless, indeed, average money costs are falling rapidly enough in this region to make the "competitive point" the most remunerative after all. It is curious that it is precisely the condition of falling average cost that has given the most worry to antimonopoly writers, who have been concerned that one given firm in any industry might grow to "monopoly" size because of

this condition. And yet, if it is "monopoly price," not monopoly, that is particularly important, such worry is clearly unfounded. On the general unimportance of cost considerations in monopoly theory, *see* Chamberlin, *Theory of Monopolistic Competition,* pp. 193–94.

40. We are devoting space to analysis of monopoly-price theory and its consequences because the theory, though invalid on the *free* market, will prove very useful in analyzing the consequences of monopoly grants by government.
41. As Mises warns: "It would be a serious blunder to deduce from the antithesis between monopoly price and competitive price that the monopoly price is the outgrowth of the absence of competition. There is always catallactic competition on the market. Catallactic competition is no less a factor in the determination of monopoly prices than it is in the determination of competitive prices. The shape of the demand curve that makes the appearance of monopoly prices possible and directs the monopolists' conduct is determined by the competition of all other commodities competing for the buyers' dollars. The higher the monopolist fixes the price at which he is ready to sell, the more potential buyers turn their dollars toward other vendible goods. On the market, every commodity competes with all other commodities." Mises, *Human Action,* p. 278.
42. We are not discussing here the generally conceded point that monopoly profits are capitalized in capital gains to the shares of the firm's stock.
43. To attain a monopoly price, the factor-owner must meet two conditions: (*a*) He must be a monopolist (in the sense of definition 1) over the factor; if he were not, the monopoly gain could be bid away by competitors entering the field; and (*b*) the demand curve for the factor must be inelastic above the competitive-price point.
44. This is the underlying assumption in Mrs. Joan Robinson's *Economics of Imperfect Competition.*
45. Bidding takes place among numerous firms in various industries, not only among firms in the same industry.
46. An amusing instance of this concern is this argument for compulsory legal cartelization by West German industrialists: "that the so-called unrestricted competition would produce a catastrophe in which the stronger industries would destroy the weaker and establish themselves as monopolies." Create an *inefficient* monopoly now to avoid an *efficient* monopoly later! M. S. Handler, "German Unionism Supports Cartels," *New York Times,* March 17, 1954, p. 12. For other such instances, *see* Charles F. Phillips, *Competition? Yes, but . . .* (Irvington-on-Hudson: Foundation for Economic Education, 1955).
47. What of the allegedly vast "financial power" of a big firm, rendering it impervious to cost? In a brilliant article, Professor Wayne Leeman has pointed out that a larger firm will also have larger volume and will therefore suffer greater losses when selling below cost. Having a larger volume, it has more to lose. What is relevant, therefore, is not the *absolute* size of the financial resources of the competing firms, but the size of their resources in relation to their volume of sales and expendi-

tures. And this changes the conventional picture drastically. Wayne A. Leeman, "The Limitations of Local Price-Cutting as a Barrier to Entry," *Journal of Political Economy,* August, 1956, pp. 331–32.

48. After investigating conditions in the retail gasoline industry (one particularly subject to allegedly "cutthroat" competition), an economist declared: "Some people think that leading marketers occasionally reduce prices to drive out competition so that they may later enjoy a monopoly. But, as one oil man has put it, 'That is like trying to sweep back the ocean to get a dry place to sit down. . . .' [Competitors] . . . never scare, and never hesitate for long, and would move in immediately when prices were restored, offering little opportunity to a single marketer to recoup his losses." Harold Fleming, *Oil Prices and Competition* (American Petroleum Institute, 1953), p. 54.
49. Leeman, *op. cit.,* pp. 330–31.
50. A leading oil executive told Leeman: "We have invested too much in plant and equipment in this area to want to invite in a host of competitors under an umbrella of high prices." *Ibid.,* p. 331.
51. Leeman points out, in a striking refutation of one of the myths of our age, that this is *precisely* what happened to John D. Rockefeller. "According to a widely accepted view, he softened up small competitors in the oil business by a period of intensive price competition, bought them out for a song, and then raised prices to consumers to make up his losses. Actually, the softening-up process did not work . . . for Rockefeller usually ended up paying . . . so handsomely that the sellers, often in violation of promises made; proceeded to build another plant for its nuisance value, hoping again to collect a reward from their benefactor. . . . Rockefeller after a time got tired of paying . . . 'blackmail' and . . . decided that the best way to hold the dominant position he wanted was to keep profit margins small all the time." *Ibid.,* p. 332. *Also see* Marian V. Sears, "The American Businessman at the Turn of the Century," *The Business History Review,* December, 1956, p. 391. Moreover, Professor McGee has shown, after an intensive investigation, that in not one instance did Standard Oil attempt "predatory price-cutting," thus destroying the Standard Oil myth once and for all. John S. McGee, "Predatory Price-Cutting: The Standard Oil (New Jersey) Case," *The Journal of Law and Economics,* October, 1958, pp. 137–69.
52. Leeman concludes, quite correctly, that large rather than small firms dominate many markets, *not* as a result of victorious cutthroat competition and monopolistic pricing, but by taking advantage of the low costs of much large-scale production and keeping prices low in fear of *potential* as well as actual rivals. Leeman, *op. cit.,* pp. 333–34.
53. We have found in the literature only one hint of the discovery of this illusion: Scoville and Sargent, *op. cit.,* p. 302. *See also* Bradford B. Smith, "Monopoly and Competition," *Ideas on Liberty,* No. 3 (November, 1955), pp. 66 ff.
54. In the case of depletable natural resources, *any* allocation of use necessarily involves the use of some of the resource in the present (even considering the resource as homogeneous) and the "withholding" of the

remainder for allocation to future use. But there is no way of conceptually distinguishing such withholding from "monopolistic" withholding and therefore of discussing a "monopoly price."

55. See the reference to Abbott, *op. cit.*, in note 28 above.
56. On "natural monopoly" doctrine as applied to the electrical industry, *see* Dean Russell, *The TVA Idea* (Irvington-on-Hudson: Foundation for Economic Education, 1949), pp. 79–85. For an excellent discussion of the regulation of public utilities, *see* Dewing, *op. cit.*, I, 308–68.
57. "Prices are a market phenomenon. . . . They are the resultant of a certain constellation of market data, of actions and reactions of the members of a market society. It is vain to meditate what prices would have been if some of their determinants had been different. . . . It is no less vain to ponder on what prices ought to be. Everybody is pleased if the prices of things he wants to buy drop and the prices of the things he wants to sell rise. . . . Any price determined on a market is the necessary outgrowth of the interplay of the forces operating, that is, demand and supply. Whatever the market situation which generated this price may be, with regard to it the price is always adequate, genuine, and real. It cannot be higher if no bidder ready to offer a higher price turns up, and it cannot be lower if no seller ready to deliver at a lower price turns up. Only the appearance of such people ready to buy or sell can alter prices. Economics . . . does not develop formulas which would enable anybody to compute a 'correct' price different from that established on the market by the interaction of buyers and sellers. . . . This refers also to monopoly prices. . . . *No alleged 'fact finding' and no armchair speculation can discover another price at which demand and supply would become equal.* The failure of all experiments to find a satisfactory solution for the limited-space monopoly of public utilities clearly proves this truth." (Italics added.) Mises, *Human Action*, pp. 392–94.
58. The first to point out the error in the common talk of "monopoly wage rates" of unions was Professor Mises. *See* his brilliant discussion in *Human Action*, pp. 373–74. *Also see* P. Ford, *The Economics of Collective Bargaining* (Oxford: Basil Blackwell, 1958), pp. 35–40. Ford also refutes the thesis advanced by the recent "Chicago School" that unions perform a service as sellers of labor: "But a union does not itself produce or sell the commodity, labour, nor receive payment for it. . . . It could be more fitly described as . . . fixing the wages and other conditions on which its individual members are permitted to sell their services to the individual employers." *Ibid.*, p. 36.
59. A restrictionist, rather than a monopoly, price can be achieved because the number of laborers is so important in relation to the possible variation in *hours* of work by an individual laborer that the latter can be ignored here. If, however, the total labor supply is limited originally to a few people, then an imposed higher wage rate will cut down the number of hours purchased from the workers who remain working, perhaps so much as to render a restrictionist price unprofitable to them.

In such a case it would be more appropriate to speak of a *monopoly* price.

60. Cf. Mises, *Human Action,* p. 764.
61. *See* Charles E. Lindblom, *Unions and Capitalism* (New Haven: Yale University Press, 1949), pp. 78 ff., 92–97, 108, 121, 131–32, 150–52, 155. *Also see* Henry C. Simons, "Some Reflections on Syndicalism" in *Economic Policy for a Free Society* (Chicago: University of Chicago Press, 1948), pp. 131 f., 139 ff.; Martin Bronfenbrenner, "The Incidence of Collective Bargaining," *American Economic Review, Papers and Proceedings,* May, 1954, pp. 301–02; Fritz Machlup, "Monopolistic Wage Determination as a Part of the General Problem of Monopoly" in *Wage Determination and the Economics of Liberalism* (Washington, D. C.: Chamber of Commerce of the United States, 1947), pp. 64–65.
62. *See* Murray N. Rothbard, "Mises' 'Human Action': Comment," *American Economic Review,* March, 1951, pp. 183–84.
63. The same is true, to an even greater extent, of measures of governmental intervention in the market. See chapter 12 below.
64. *See* James Birks, *Trade Unionism in Relation to Wages* (London, 1897), p. 30.
65. *See* James Birks, *Trades' Unionism: A Criticism and a Warning* (London, 1894), p. 22.
66. We can deal here only with the directly catallactic consequences of labor unionism. Unionism also has other consequences which many might consider even more deplorable. Prominent is the fusing of the able and the incompetent into one group. Seniority rules, for example, are invariable favorites of unions. They set restrictively high wages for less able workers and also lower the productivity of all. But they also *reduce* the wages of the more able workers—those who must be chained to the stultifying march of seniority for their jobs and promotions. Seniority also decreases the mobility of workers and creates a kind of industrial serfdom by establishing vested rights in jobs according to the length of time the employees have worked. Cf. David McCord Wright, "Regulating Unions" in Bradley, *op. cit.,* pp. 113–21.
67. Students of labor unions have almost universally ignored the systematic use of violence by unions. For a welcome exception, *see* Sylvester Petro, *Power Unlimited* (New York: Ronald Press, 1959). Also cf. F. A. Hayek, "Unions, Inflation, and Profits," *op. cit.,* p. 47.
68. On the nature and consequences of these various criteria of wage determination, *see* Ford, *op. cit.,* pp. 85–110.
69. See the excellent critique by Hutt, *The Theory of Collective Bargaining, passim.*
70. On the Ricardo effect, *see* Mises, *Human Action,* pp. 767–70. Also see the detailed critique by Ford, *op. cit.,* pp. 56–66, who also points to the union record of hindering mechanization by imposing restrictive work rules and by moving quickly to absorb any possible gain from the new equipment.
71. In particular, *see* Edward H. Chamberlin, *Theory of Monopolistic Competition,* and Mrs. Joan Robinson, *Economics of Imperfect Com-*

petition. For a lucid discussion and comparison of the two works, *see* Robert Triffin, *Monopolistic Competition and General Equilibrium Theory* (Cambridge: Harvard University Press, 1940). The differences between the "monopolistic" and the "imperfect" formulations are not important here.

72. Recently, Professor Chamberlin has conceded this point and has, in a series of remarkable articles, astounded his followers by repudiating the concept of pure competition as a welfare ideal. Chamberlin now declares: "The welfare ideal itself . . . is correctly described as one of monopolistic competition . . . [This] seems to follow very directly from the recognition that human beings are individual, diverse in their tastes and desires, and moreover, widely dispersed spatially." Chamberlin, *Towards a More General Theory of Value,* pp. 93–94; also *ibid.,* pp. 70–83; E. H. Chamberlin and J. M. Clark, "Discussion," *American Economic Review, Papers and Proceedings,* May, 1950, pp. 102–04; Hunter, *op. cit.,* pp. 533–52; Hayek, "The Meaning of Competition" in *Individualism and the Economic Order,* p. 99; and Marshall I. Goldman, "Product Differentiation and Advertising: Some Lessons from Soviet Experience," *Journal of Political Economy,* August, 1960, pp. 346–57. Also see note 28 above.
73. This definition of the demand curve to the firm was Mrs. Robinson's outstanding contribution, unfortunately repudiated by her recently. Triffin castigated Mrs. Robinson for evading the problem of "oligopolistic indeterminacy," whereas actually she had neatly solved this pseudo problem. *See* Robinson, *op. cit.,* p. 21. For other aspects of oligopoly, *see* Willard D. Arant, "Competition of the Few among the Many," *Quarterly Journal of Economics,* August, 1956, pp. 327–45.
74. For an acute criticism of monopolistic-competition theory, *see* L. M. Lachmann, "Some Notes on Economic Thought, 1933–53," *South African Journal of Economics,* March, 1954, pp. 26 ff., especially pp. 30–31. Lachmann points out that economists generally treat types of "perfect" or "monopolistic" competition as static market forms, whereas competition is actually a dynamic process.
75. And the product differentiation associated with the falling demand curve may well lower costs of distribution and of inspection (as well as improve consumer knowledge) to more than offset the supposed rise in production costs. In short, the *AC* curve above is *really* a production-cost, rather than a total-cost, curve, neglecting distribution costs. Cf. Goldman, *loc. cit.* Furthermore, a genuine total-cost curve would then not be independent of the firm's demand curve, thus vitiating the usual "cost-curve" analysis. *See* Dewey, *op. cit.,* p. 87. Also see section C below.
76. *See* Chamberlin, "Measuring the Degree of Monopoly and Competition" and "Monopolistic Competition Revisited" in *Towards a More General Theory of Value,* pp. 45–83.
77. *See* J. M. Clark, "Competition and the Objectives of Government Policy" in E. H. Chamberlin, ed., *Monopoly and Competition and Their Regulation* (London: Macmillan, 1954), pp. 317–27; Clark, "Toward a

Concept of Workable Competition" in *Readings in the Social Control of Industry* (Philadelphia: Blakiston, 1942), pp. 452–76; Clark, "Discussion," *loc. cit.;* Abbott, *op. cit., passim;* Joseph A. Schumpeter, *Capitalism, Socialism and Democracy* (New York: Harper & Bros., 1942); Hayek, "The Meaning of Competition," *loc. cit.,* and Lachmann, *loc. cit.*

78. See the above citations by Clark; and Richard B. Heflebower, "Toward a Theory of Industrial Markets and Prices" in R. B. Heflebower and G. W. Stocking, eds., *Readings on Industrial Organization and Public Policy* (Homewood, Ill.: R. D. Irwin, 1958), pp. 297–315. A more dubious argument—the flatness of the firm's demand curve in the relevant range—has been stressed by other economists, notably A. J. Nichol, "The Influence of Marginal Buyers on Monopolistic Competition," *Quarterly Journal of Economics,* November, 1934, pp. 121–34; Alfred Nicols, "The Rehabilitation of Pure Competition," *Quarterly Journal of Economics,* November, 1947, pp. 31–63; and Nutter, *loc. cit.*
79. But cf. Abbott, *op. cit.,* pp. 180–81.
80. The author first learned this particular piece of analysis from the classroom lectures of Professor Arthur F. Burns, and, to our knowledge, it has never seen print.
81. Roy Harrod, *Economic Essays* (New York: Harcourt, Brace, 1952), p. 149.
82. After arriving at this conclusion, the author came across a brilliant but neglected article pointing out that interest is a return and not a cost, and showing the devastating implications of this fact for cost-curve theory. The article does not, however, apply the theory satisfactorily to the problem of monopolistic competition. *See* Gabor and Pearce, "A New Approach to the Theory of the Firm," *loc. cit.,* and *id.,* "The Place of Money Capital, etc.," *loc. cit.* While there are a few similarities, Professor Dewey's critique of the "excess capacity" doctrine is essentially very different from ours and based on far more "orthodox" considerations. Dewey, *op. cit.,* pp. 96 ff.
83. Since the erroneous but popular theory of "countervailing power," propounded by J. K. Galbraith, falls with the monopolistic-competition theory, it is unnecessary to discuss it here. For a more detailed critique of its numerous fallacies, *see* Simon N. Whitney, "Errors in the Concept of Countervailing Power," *Journal of Business,* October, 1953, pp. 238–53; George J. Stigler, "The Economist Plays with Blocs," *American Economic Review, Papers and Proceedings,* May, 1954, pp. 8–14; and David McC. Wright, "Discussion," *ibid.,* pp. 26–30.
84. Chamberlin, *Theory of Monopolistic Competition,* pp. 123 ff. Chamberlin includes in selling costs advertising, sales expenses, and store displays.
85. *See* Mises, *Human Action,* p. 319. *Also see* Kermit Gordon, "Concepts of Competition and Monopoly—Discussion," *American Economic Review, Papers and Proceedings,* May, 1955, pp. 486–87.
86. It is surely highly artificial to call bright ribbons on a packaged good a "production cost," while labeling bright ribbons decorating the store selling the good as a "selling cost."

87. Cf. Alfred Nicols, "The Development of Monopolistic Competition and the Monopoly Problem," *Review of Economics and Statistics,* May, 1949, pp. 118–23.
88. "The consumer is, according to . . . legend, simply defenseless against 'high-pressure' advertising. If this were true, success or failure in business would depend on the mode of advertising only. However, nobody believes that any kind of advertising would have succeeded in making the candlemakers hold the field against the electric bulb, the horse-drivers against the motor cars. . . . But this implies that the quality of the commodity advertised is instrumental in bringing about the success of an advertising campaign. . . . The tricks and artifices of advertising are available to the seller of the better product no less than to the seller of the poorer product. But only the former enjoys the advantages derived from the better quality of his product." Mises, *Human Action,* pp. 317–18.
89. *See* Wicksteed, *op. cit.,* I, 253 ff.
90. It is difficult to conceive of a case, in reality, to which such a restriction imposed on buyers (called "perfect price-discrimination") would apply. Mrs. Robinson cites as an example a ransom charged by a kidnapper, but this, of course, does not obtain on the free, unhampered market, which precludes kidnapping. Robinson *op. cit.,* p. 187 n.
91. *See* Mises, *Human Action,* pp. 385 ff.
92. An example is medicine, where the government helps to restrict the supply and thus to prevent price-cutting. See the illuminating article by Reuben A. Kessel, "Price Discrimination in Medicine," *The Journal of Law and Economics,* October, 1958, pp. 20–53. Also see chapter 12 below on grants of monopoly privilege.
93. Henry George was a notable exception. See his excellent discussion in *Progress and Poverty* (New York: Modern Library, 1929), p. 411 n.
94. Richard Wincor, *How to Secure Copyright* (New York: Oceana Publishers, 1950), p. 37.
95. Irving Mandell, *How to Protect and Patent Your Invention* (New York: Oceana Publishers, 1951), p. 34.
96. This can be seen in the field of *designs,* which can be either copyrighted or patented.
97. For a legal hint on the proper distinction between copyright and monopoly, *see* F. E. Skone James, "Copyright" in *Encyclopædia Britannica* (14th ed.; London, 1929), VI, 415–16. For the views of nineteenth-century economists on patents, *see* Fritz Machlup and Edith T. Penrose, "The Patent Controversy in the Nineteenth Century," *Journal of Economic History,* May, 1950, pp. 1–29. *Also see* Fritz Machlup, *An Economic Review of the Patent System* (Washington, D. C.: United States Government Printing Office, 1958).
98. Of course, there would be nothing to prevent the creator or his heirs from voluntarily abandoning this property right and throwing it into the "public domain" if they so desired.
99. See the illuminating article by Machlup and Penrose, *op. cit.,* pp. 1–29,
100. Cited in Edith Penrose, *Economics of the International Patent System* (Baltimore: Johns Hopkins Press, 1951), p. 36; also see *ibid.,* pp. 19–41.

101. Arnold Plant, "The Economic Theory concerning Patents for Inventions," *Economica,* February, 1934, p. 44.

NOTES TO CHAPTER 11

1. Cf. Edwin Cannan, "The Application of the Theoretical Analysis of Supply and Demand to Units of Currency" in F. A. Lutz and L. W. Mints, eds., *Readings in Monetary Theory* (Philadelphia: Blakiston, 1951), pp. 3–12, and Cannan, *Money* (6th ed.; London: Staples Press, 1929), pp. 10–19, 65–78.
2. From this point on, this nonmonetary demand is included, for convenience, in the "total demand for money."
3. Cf. Irving Fisher, *The Purchasing Power of Money* (2nd ed.; New York: Macmillan, 1913).
4. A typical such classification can be found in Lester V. Chandler, *An Introduction to Monetary Theory* (New York: Harper & Bros., 1940).
5. *See* Mises, *Theory of Money and Credit,* p. 98. The entire volume is indispensable for the analysis of money. *Also see* Mises, *Human Action,* ch. xvii and ch. xx.
6. See chapter 12 below for a discussion of the concept of social benefit or social utility.
7. J. M. Keynes' *Treatise on Money* (New York: Harcourt, Brace, 1930) is a classic example of this type of analysis.
8. On the clearing system, *see* Mises, *Theory of Money and Credit,* pp. 281–86.
9. Since no one can receive a money *income* unless someone else makes a money *expenditure* on his services. (See chapter 3 above.)
10. Strictly, the *ceteris paribus* condition will tend to be violated. An increased demand for money tends to lower money prices and will therefore lower money costs of gold mining. This will stimulate gold mining production until the interest return on mining is again the same as in other industries. Thus, the increased demand for money will also call forth new money to meet the demand. A decreased demand for money will raise money costs of gold mining and at least lower the rate of new production. It will not actually decrease the total money stock unless the new production rate falls below the wear-and-tear rate. Cf. Jacques Rueff, "The Fallacies of Lord Keynes' General Theory" in Henry Hazlitt, ed., *The Critics of Keynesian Economics* (Princeton: D. Van Nostrand, 1960), pp. 238–63.
11. See the excellent article by W. H. Hutt, "The Significance of Price Flexibility" in Hazlitt, *The Critics, etc.,* pp. 383–406.
12. The term generally used is "national" income. However, in a free-market economy the nation will no more be an important economic boundary than the village or region. It is more convenient, then, to set aside regional problems for other analysis and to concentrate on aggregate social income; this is especially true since regions do not present a problem to economic theory until their governments begin intervening in the free market.

13. Thus, see the revealing article by Franco Modigliani, "Liquidity Preference and the Theory of Interest and Money" in Hazlitt, *The Critics, etc.*, pp. 156–69. Also see the articles by Erik Lindahl, "On Keynes' Economic System," *The Economic Record,* May, 1954, pp. 19–32; November, 1954, pp. 159–71; and Wassily W. Leontief, "Postulates: Keynes' *General Theory* and the Classicists" in S. Harris, ed., *The New Economics* (New York: Knopf, 1952), pp. 232–42. For an empirical critique of the assumed Keynesian correspondence between aggregate output and employment, *see* George W. Wilson, "The Relationship between Output and Employment," *Review of Economics and Statistics,* February, 1960, pp. 37–43.
14. This is what Keynes' discussion of "wage units" amounted to. Cf. Lindahl, "On Keynes' Economic System—Part I," *op. cit.,* p. 20.
15. Cf. Lindahl, *op. cit.,* pp. 25, 159 ff. Lindahl's articles provide a good summary as well as a critique of the Keynesian system.
16. Furthermore, inflation is, at best, an inefficient and distortive substitute for flexible wage rates. For inflation affects the entire economy and its prices, while particular wage rates will fall only to the extent necessary to "clear" the market for the particular labor factor. Thus, freely flexible wage rates will fall only in those fields necessary to eliminate unemployment in those particular areas. Cf. Henry Hazlitt, *The Failure of the "New Economics"* (Princeton: D. Van Nostrand, 1959), pp. 278 ff.
17. Cf. L. Albert Hahn, *The Economics of Illusion* (New York: Squier Publishing Co., 1949), pp. 50 ff., 166 ff., and *passim.*
18. Cf. Hutt, "The Significance of Price Flexibility," *loc. cit.*
19. Cf. Lindahl's critique of Lawrence Klein's *The Keynesian Revolution* in *op. cit.,* p. 162. *Also see* Leontief, *loc. cit.*
20. Modigliani, *op. cit.,* pp. 139–40.
21. *Ibid.,* p. 137.
22. See the critique of the Keynesian doctrine by Tjardus Greidanus, *The Value of Money* (2nd ed.; London: Staples Press, 1950), pp. 194–215, and of the liquidity-preference theory by D. H. Robertson, "Mr. Keynes and the Rate of Interest" in *Readings in the Theory of Income Distribution,* pp. 439–41. In contrast to Keynes' famous phrase that the rate of interest is "the reward for parting with liquidity," Greidanus points out that buying consumers' goods (or even producers' goods in Keynes' sense of "interest") sacrifices liquidity and yet earns no interest "reward." Greidanus, *op. cit.,* p. 211. *Also see* Hazlitt, *The Failure, etc.,* pp. 186 ff.
23. Mises, *Human Action,* pp. 529–30.
24. Hutt concludes that equilibrium "is secured when all services and products are so priced that they are (i) brought within the reach of people's pockets (i.e., so that they are purchasable by existing money incomes) or (ii) brought into such a relation to predicted prices that no postponement of expenditure on them is induced. For instance, the products and services used in the manufacture of investment goods must be so priced that anticipated future money incomes will be able to buy the services and depreciation of new equipment or replacements." Hutt, "The Significance of Price Flexibility," *op. cit.,* p. 394.

25. "Postponements (in purchases) arise because it is judged that a cut in costs (or other prices) is less than will eventually have to take place, or because the rate of fall of costs is insufficiently rapid." *Ibid.,* p. 395.
26. As Hutt points out, if we can conceive of a situation of infinitely elastic liquidity preference (and no such situation has ever existed), then "we can conceive of prices falling rapidly, keeping pace with expectations of price changes, but never reaching zero, with full utilization of resources persisting all the way." *Ibid.,* p. 398.
27. L. M. Lachmann, "Uncertainty and Liquidity Preference," *Economica,* August, 1937, p. 301.
28. Irving Fisher, *The Rate of Interest* (New York, 1907), ch. v, xiv; *id., The Purchasing Power of Money,* pp. 56–59.
29. For an exposition of the feasibility of private coinage, *see* Spencer, *op. cit.,* pp. 438–39; Charles A. Conant, *The Principles of Money and Banking* (New York: Harper & Bros., 1905), I, 127–32; Lysander Spooner, *A Letter to Grover Cleveland* (Boston: B. R. Tucker, 1886), p. 79; B. W. Barnard, "The Use of Private Tokens for Money in the United States," *The Quarterly Journal of Economics,* 1916–17, pp. 617–26.

    Recent writers favorable to private coinage include: Everett Ridley Taylor, *Progress Report on a New Bill of Rights* (Diablo, California: the author, 1954); Oscar B. Johannsen, "Advocates Unrestricted Private Control over Money and Banking," *The Commercial and Financial Chronicle,* June 12, 1958, pp. 2622 f.; Leonard E. Read, *Government—An Ideal Concept* (Irvington-on-Hudson: Foundation for Economic Education, 1954), pp. 82 ff. An economist hostile to market-controlled commodity money has recently conceded the feasibility of private coinage under a commodity standard. Milton Friedman, *A Program for Monetary Stability* (New York: Fordham University Press, 1960), p. 5.
30. Time deposits are, legally, future claims, since banks have a legal right to delay payment thirty days. Moreover, they do not pass as final media of exchange. The latter fact is not determining, however, since a secure claim to a money-substitute is itself part of the money supply. "Idle" cash balances are kept as "time deposits," just as gold bullion is a more "idle" form of money than coins. The deciding factor, perhaps, is that the thirty-day limit is virtually a dead letter, for if a "savings" bank should impose it, a bankrupting "run" on the bank would ensue. Furthermore, actual payments are sometimes made by "cashiers' checks" on time deposits. Thus, "time" deposits now function as *demand* deposits and should be treated as part of the money supply. If banks wished to act as genuine *savings* banks, borrowing and lending *credit,* they could issue IOU's for specified lengths of time, due at definite future dates. Then no confusion or possible "counterfeiting" could arise.
31. Such items as bills of lading, pawn tickets, and dock warrants have been warehouse receipts rooted in the specific objects deposited, in contrast to the loose "general deposits" where a homogeneous good can be returned. *See* W. Stanley Jevons, *Money and the Mechanism of Exchange* (16th ed.; London: Kegan Paul, Trench, Trübner & Co., 1907), pp. 201–11.

32. We might ask why the owners of the bank do not really reap the spoils and lend the money to themselves. The answer is that they once did so profusely, as the history of early American banking shows. Legal regulations forced the banks to abandon this practice.
33. This discussion is not meant to imply that bankers, particularly at the present time, are always knowingly engaged in fraudulent practices. So embedded, indeed, have these practices become, and always with the sanction of law as well as of sophisticated but fallacious economic doctrines, that it is undoubtedly a rare banker who regards his standard occupational procedure as fraudulent.
34. For a brilliant discussion of fractional-reserve banking, *see* Amasa Walker, *The Science of Wealth* (3rd ed.; Boston: Little, Brown & Co., 1867), pp. 138–68, 184–232.
35. Swiss banks have successfully and for a long time been issuing debentures to the public at varying maturities, and banks in Belgium and Holland have recently followed suit. On the purely free market, such practices would undoubtedly be greatly extended. Cf. Benjamin H. Beckhart, "To Finance Term Loans," *The New York Times,* May 31, 1960.
36. Jevons, *Money and the Mechanism of Exchange,* pp. 211–12.
37. "If pecuniary promises were always of a special character, there could be no possible harm in allowing perfect freedom in the issue of promissory notes. The issuer would merely constitute himself a warehouse keeper and would be bound to hold each special lot of coin ready to pay each corresponding note." *Ibid.,* p. 208.
38. *See* Mises, *Theory of Money and Credit,* pp. 131–45.
39. *See* Mises, *Human Action,* pp. 413–16.
40. For an appreciation of Mises' achievement in clarifying this problem, *see* Wu, *op. cit.,* pp. 127, 232–34.
41. As we shall see below, however, interlocal *clearing* can greatly narrow these limits.
42. To say that "exports pay for imports" is simply to say that income pays for expenditures.
43. For an excellent and original analysis of balances of payments along these lines, *see* Mises, *Human Action,* pp. 447–49.
44. Cf. Mises, *Human Action,* pp. 459–61.
45. Mises, *Theory of Money and Credit,* pp. 285–86.
46. For recent evidence that this action in the United States was a deliberate "crime against silver," and not sheer accident, *see* Paul M. O'Leary, "The Scene of the Crime of 1873 Revisited," *Journal of Political Economy,* August, 1960, pp. 388–92. One argument in favor of such action holds that the government thereby simplified accounts in the economy. However, the market could easily have done so itself by keeping all accounts in gold.
47. *See* Mises, *Theory of Money and Credit,* pp. 179 ff., and Jevons, *Money and the Mechanism of Exchange,* pp. 88–96. For advocacy of such parallel standards, *see* Isaiah W. Sylvester, *Bullion Certificates as Currency* (New York, 1882) and William Brough, *Open Mints and Free Banking* (New York: G. P. Putnam's Sons, 1894). Sylvester, who also advocated

100% specie-reserve currency, was an official of the United States Assay Office.

For historical accounts of the successful working of parallel standards, *see* Luigi Einaudi, "The Theory of Imaginary Money from Charlemagne to the French Revolution" in F. C. Lane and J. C. Riemersma, eds., *Enterprise and Secular Change* (Homewood, Ill.: R. D. Irwin, 1953), pp. 229–61; Robert Sabatino Lopez, "Back to Gold, 1252," *Economic History Review,* April, 1956, p. 224; and Arthur N. Young, "Saudi Arabian Currency and Finance," *The Middle East Journal,* Summer, 1953, pp. 361–80.

48. Fisher, *The Purchasing Power of Money,* especially pp. 13 ff.
49. *Ibid.,* p. 13.
50. *Ibid.,* p. 14.
51. We are using "dollars" and "cents" here instead of weights of gold for the sake of simplicity and because Fisher himself uses these expressions.
52. *Ibid.,* p. 16.
53. *Ibid.,* p. 17.
54. Greidanus justly calls this sort of equation "in all its absurdity the prototype of the equations set up by the equivalubrists," in the modern mode of the "economics of the bookkeeper, not of the economist. . . ." Greidanus, *op. cit.,* p. 196.
55. Fisher, *The Purchasing Power of Money,* p. 16.
56. For a brilliant critique of the disturbing effects of averaging even when a commensurable unit *does* exist, *see* Louis M. Spadaro, "Averages and Aggregates in Economics" in *On Freedom and Free Enterprise,* pp. 140–60.
57. *See* Clark Warburton, "Elementary Algebra and the Equation of Exchange," *American Economic Review,* June, 1953, pp. 358–61. *Also see* Mises, *Human Action,* p. 396; B. M. Anderson, Jr., *The Value of Money* (New York: Macmillan, 1926), pp. 154–64; and Greidanus, *op. cit.,* pp. 59–62.
58. Conventional accounting practice is based on a fixed value of the monetary unit.
59. Professor Mises has pointed out that the assertion of the mathematical economists that their task is made difficult by the existence of "many variables" in human action grossly understates the problem; for the point is that *all* the determinants are variables and that in contrast to the natural sciences *there are no constants.*
60. See the brilliant critique of index numbers by Mises, *Theory of Money and Credit,* pp. 187–94. *Also see* R. S. Padan, "Review of C. M. Walsh's *Measurement of General Exchange Value,*" *Journal of Political Economy,* September, 1901, p. 609.
61. Irving Fisher, *Stabilised Money* (London: George Allen & Unwin, 1935), p. 375.
62. The fact that the purchasing power of the monetary unit is not quantitatively definable does not negate the fact of its *existence,* which is established by prior praxeological knowledge. It thereby differs, for example, from the "competitive price–monopoly price" dichotomy, which cannot

be independently established by praxeological deduction for free-market conditions.

63. Cited in Wesley C. Mitchell, *Business Cycles, the Problem and Its Setting* (New York: National Bureau of Economic Research, 1927), pp. 76–77.
64. "The whole psychological theory of the business cycle appears to be hardly more than an inversion of the real causal sequence. Expectations more nearly derive from objective conditions than produce them. . . . It is not the wave of optimism that makes times good. Good times are almost bound to bring a wave of optimism with them. On the other hand, when the decline comes, it comes not because anyone loses confidence, but because the basic economic forces are changing." V. Lewis Bassie, "Recent Development in Short-Term Forecasting," *Studies in Income and Wealth,* XVII (Princeton: National Bureau of Economic Research, 1955), 10–12.
65. Joseph A. Schumpeter, *The Theory of Economic Development* (Cambridge: Harvard University Press, 1936) and *id., Business Cycles* (New York: McGraw-Hill, 1939).
66. Warren and Pearson, as well as Dewey and Dakin, conceive of the business cycle as made up of superimposed, independent, periodic cycles from *each field* of production activity. *See* George F. Warren and Frank A. Pearson, *Prices* (New York: John Wiley and Sons, 1933); E. R. Dewey and E. F. Dakin, *Cycles: The Science of Prediction* (New York: Holt, 1949).
67. On the tendency to neglect the consumer's role in innovation, cf. Ernst W. Swanson, "The Economic Stagnation Thesis, Once More," *The Southern Economic Journal,* January, 1956, pp. 287–304.
68. S. S. Kuznets, "Schumpeter's *Business Cycles,*" *American Economic Review,* June, 1940, pp. 262–63; Richard V. Clemence and Francis S. Doody, *The Schumpeterian System* (Cambridge: Addison-Wesley Press, 1950), pp. 52 ff.
69. In so far as innovation is a regularized business procedure of research and development, rents from innovations will accrue to the research and development workers in firms, rather than to entrepreneurial profits. Cf. Carolyn Shaw Solo, "Innovation in the Capitalist Process: A Critique of the Schumpeterian Theory," *Quarterly Journal of Economics,* August, 1951, pp. 417–28.
70. Some Keynesians account for investment by the "acceleration principle" (see below). The Hansen "stagnation" thesis—that investment is determined by population growth, the rate of technological improvement, etc.—seems happily to be a thing of the past.
71. *See* Lindahl, *op. cit.,* p. 169 n. Lindahl shows the difficulties of mixing an *ex post* income line with *ex ante* consumption and spending, as the Keynesians do. Lindahl also shows that the expenditure and income lines coincide if the divergence between expected and realized income affects income and not stocks. Yet it cannot affect stocks, for, contrary to Keynesian assertion, there is no such thing as hoarding or any other unexpected event leading to "unintended increase in inventories." An increase in inventories is never unintended, since the seller has the alter-

native of selling the good at the market price. The fact that his inventory increases means that he has voluntarily *invested* in larger inventory, hoping for a future price rise.

72. Summing up disillusionment with the consumption function are two significant articles: Murray E. Polakoff, "Some Critical Observations on the Major Keynesian Building Blocks," *Southern Economic Journal,* October, 1954, pp. 141–51, and Leo Fishman, "Consumer Expectations and the Consumption Function," *ibid.,* January, 1954, pp. 243–51.
73. Keynes, *General Theory, etc.,* pp. 89–112.
74. *Ibid.,* pp. 109–10.
75. What is "fairly" supposed to mean? How can a theoretical law be based on "fair" stability? More stable than other functions? What are the grounds for this assumption, particularly as a law of human action? *Ibid.,* pp. 89–96.
76. Actually, the form of the Keynesian function is generally "linear," e.g., Consumption = .80 (Income) + 20. The form given in the text simplifies the exposition without, however, changing its essence.
77. *Also see* Hazlitt, *The Failure, etc.,* pp. 135–55.
78. It is usually overlooked that this replacement pattern, necessary to the acceleration principle, could apply only to those firms or industries that had been growing in size rapidly and continuously.
79. See his brilliant critique of the acceleration principle in W. H. Hutt, *Co-ordination and the Price System* (unpublished, but available from the Foundation for Economic Education, Irvington-on-Hudson, 1955), pp. 73–117.
80. Neglect of prices and price relations is at the core of a great many economic fallacies.
81. *See* Mises, *Human Action,* pp. 581 f.; S. S. Kuznets, "Relations between Capital Goods and Finished Products in the Business Cycle" in *Economic Essays in Honor of Wesley Clair Mitchell* (New York: Columbia University Press, 1935), p. 228; and Hahn, *Commonsense Economics,* pp. 139–43.
82. See the excellent critique by Leland B. Yeager of the neostagnationist Keynesian versions of "growth economics" of Harrod and Domar, which make use of the acceleration principle. Yeager, *op. cit.,* pp. 53–63.

NOTES TO CHAPTER 12

1. Some economists, notably Edwin Cannan, have denied that economic analysis could be applied to acts of violent intervention. But, on the contrary, economics is the praxeological analysis of human actions, and violent interrelations are forms of action which can be analyzed.
2. Is it, then, surprising that the early economists, all religious men, marveled at their epochal discovery of the harmony pervading the free market and tended to ascribe this beneficence to a "hidden hand" or divine harmony? It is easier for us to scoff at their enthusiasm than to realize that it does not detract from the validity of their analysis.

   Conventional writers charge, for example, that the French "optimistic" school of the nineteenth century were engaging in a naive *Harmonielehre*—a mystical idea of a divinely ordained harmony. But this charge ignores the fact that the French optimists were building on the very sound "welfare-economic" insight that voluntary exchanges on the free market conduce harmoniously to the benefit of all. For example, *see* About, *op. cit.,* pp. 104–12.

3. The study of the direct consequences for utility of intervention or nonintervention is peculiarly the realm of "welfare economics." For a critique and outline of a reconstruction of welfare economics, *see* Rothbard, "Toward a Reconstruction of Utility and Welfare Economics," *loc. cit.*
4. Perhaps we may note here the German sociologist Franz Oppenheimer's distinction between the free market and binary intervention as the "economic" as against the "political" means to the satisfaction of one's wants: "There are two fundamentally opposed means whereby man, requiring sustenance, is impelled to obtain the necessary means for satisfying his desires. These are work and robbery, one's own labor and the forcible appropriation of the labor of others . . . I propose . . . to call one's own labor and the equivalent exchange of one's own labor for the labor of others, the 'economic means' for the satisfaction of needs, while the unrequited appropriation of the labor of others will be called the 'political means' . . . The state is an organization of the political means." Oppenheimer, *op. cit.,* pp. 24–27.
5. One of the roots of this fallacy is the idea that in an exchange the two things exchanged are or should be "equal" in value and that "inequality" of value demonstrates "exploitation." We have seen, on the contrary, that any exchange involves inequality of the values of each commodity between buyer and seller, and that it is this very double inequality of values that brings about the exchange. An example of stress on this fallacy is the well-known work by Yves Simon, *Philosophy of Democratic Government* (Chicago: University of Chicago Press, 1951), ch. iv.
6. It has become fashionable to assert that John C. Calhoun anticipated the Marxian doctrine of class exploitation, but actually, Calhoun's "classes" were *castes:* creatures of State intervention itself. In particular, Calhoun saw that the binary intervention of taxation must always be spent so that some people in the community become net payers of tax funds, and the others net recipients. Calhoun defined the latter as the "ruling class" and the former as the "ruled." Thus:

   "Few, comparatively, as they are, the agents and employees of the government constitute that portion of the community who are the exclusive recipients of the proceeds of the taxes. . . . But as the recipients constitute only a portion of the community, it follows . . . that the action [of the fiscal process] must be unequal between the payers of the taxes and the recipients of their proceeds. Nor can it be otherwise; unless what is collected from each individual in the shape of taxes shall be returned to him in that of disbursements, which would make the process nugatory and absurd. . . . It must necessarily follow that some one portion of the community must pay in taxes more than it receives in disbursements, while another receives in disbursements more than it pays in taxes. It is, then, manifest . . . that taxes must be, in effect, bounties to that portion of the community which receives more in disbursements than it pays in taxes, while to the other which pays in taxes more than it receives in disbursements they are taxes in reality—burdens instead of bounties. This consequence is unavoidable. It results from the nature of the process, be the taxes ever so equally laid . . .

"The necessary result, then, of the unequal fiscal action of the government is to divide the community into two great classes: one consisting of those who, in reality, pay the taxes and, of course, bear exclusively the burden of supporting the government; and the other, of those who are the recipients of their proceeds through disbursements, and who are, in fact, supported by the government; or, the effect of this is to place them in antagonistic relations in reference to the fiscal action of the government. . . . For the greater the taxes and disbursements, the greater the gain of the one and the loss of the other, and vice versa. . . ." John C. Calhoun, *A Disquisition on Government* (New York: Liberal Arts Press, 1953), pp. 16–18.

7. See Rothbard, "Toward a Reconstruction of Utility and Welfare Economics," *loc. cit.* For an analysis of State action, *see* Gustave de Molinari, *The Society of Tomorrow* (New York: G. P. Putnam's Sons, 1904), pp. 19 ff., 65–96.
8. We have seen above that praxeology may deal with utilities only as deduced from the concrete actions of human beings. Elsewhere we have named this concept "demonstrated preference," have traced its history, and criticized competing concepts. Rothbard, "Toward a Reconstruction of Utility and Welfare Economics," *op. cit.*, pp. 224 ff.
9. For a critique of the first assumption, *see* Murray N. Rothbard, "The Mantle of Science" in Helmut Schoeck and James W. Wiggins, eds., *Scientism and Values* (Princeton: D. Van Nostrand, 1960); on the latter arguments, *see* Rothbard, "Toward a Reconstruction of Utility and Welfare Economics," *op. cit.*, pp. 256 ff.
10. Schumpeter's insights on the fallacy of attributing a voluntary nature to the State deserve to be heeded: ". . . ever since the princes' feudal incomes ceased to be of major importance, the State has been living on a revenue which was being produced in the private sphere for private purposes and had to be deflected from these purposes by political force. The theory which construes taxes on the analogy of club dues or of the purchase of the services of, say, a doctor only proves how far removed this part of the social sciences is from scientific habits of mind." Schumpeter, *Capitalism, Socialism, and Democracy*, p. 198 and 198 n.
11. I am deeply indebted to Professor Ludwig M. Lachmann, Mr. L. D. Goldblatt, and other members of Professor Lachmann's Honours Seminar in Economics at the University of Witwatersrand, South Africa, for raising these questions in their discussion of my "Reconstruction" paper cited above.

12. Neither are these contradictions removed by abandoning democracy in favor of dictatorship. For even if the mass of the public do not vote under a dictatorship, they must still consent to the rule of the dictator and his chosen experts, and therefore their unique competence in the *political* field as against other spheres of their daily life must still be assumed.
13. *See* Rothbard, "Mises' *Human Action:* Comment," *op. cit.,* pp. 383–84. Also cf. George H. Hildebrand, "Consumer Sovereignty in Modern Times," *American Economic Review, Papers and Proceedings,* May, 1951, p. 26.
14. Cf. the excellent discussion of the contrast between daily life and politics in Schumpeter, *Capitalism, Socialism, and Democracy,* pp. 258–60.
15. *Ibid.,* p. 263.
16. Schuller, "Rejoinder," *op. cit.,* p. 189.
17. We might say that this insight underlies F. A. Hayek's famous chapter, "Why the Worst Get on Top" in *The Road to Serfdom* (Chicago: University of Chicago Press, 1944), ch. x. Also see the recent brief discussion by Jack Hirshleifer, "Capitalist Ethics—Tough or Soft?" *Journal of Law and Economics,* October, 1959, p. 118.
18. Cf. the interesting definition of "democracy" in Heath, *op. cit.,* p. 234.
19. Of course, even a completely ineffective triangular control is likely to increase the government bureaucracy dealing with the matter and therefore increase the total amount of *binary* intervention over the taxpayer. But more on this below.
20. A "bribe" is only payment of the market price by a buyer.
21. Ironically, the government's destruction of part of the people's money almost always takes place *after* the government has pumped in new money and used it for its own purposes. The injury that the government imposes on the public is twofold: (1) it takes resources away from the public by inflating the currency (see below); and (2) after the money has percolated down to the public, it destroys part of the money's usefulness.
22. In the present-day United States, much of the task of coercion has been assumed on the unions' behalf by the government. This was the essence of the Wagner Act, the law of the land since 1935. (The Taft-Hartley Act was only a relatively unimportant amendment to the Wagner Act, which continues on the books.) The crucial provisions of this act are: (1) to coerce all workers in a certain production unit (arbitrarily defined *ad hoc* by the government) into being represented by a union in bargaining with an employer, if a majority of workers agree; (2) to prohibit the employer from refusing to hire union members or union organizers; and (3) to compel the employer to bargain with this union. Thus, unions have been invested with governmental authority, and the strong arm of the government uses coercion to force workers and employers alike to deal with the unions. On special coercive privilege granted to unions, *see also* Roscoe Pound, "Legal Immunities of Labor Unions" in *Labor Unions and Public Policy* (Washington: American

Enterprise Association, 1958), pp. 145–73; and Frank H. Knight, "Wages and Labor Union Action in the Light of Economic Analysis" in Bradley, *op. cit.*, p. 43. *Also see* Petro, *op. cit.*, and chapter 10, p. 628 above.

23. Mises, *Human Action*, pp. 432 n., 447, 469, 776.
24. It was notorious, for example, that the bootleggers, a caste created by Prohibition, were one of the main groups *opposing* repeal of Prohibition in America.
25. The workings of rationing (as well as the socialist system in general) have never been more vividly portrayed than in Henry Hazlitt's *The Great Idea, op. cit.*
26. We might well call the latter an *oligopoly* grant, but this would engender hopeless confusion with existing oligopoly theory. On the latter, see chapter 10 above.
27. Monopoly privilege is granted by a government, which has power only over its own geographic area. Therefore, monopoly prices achieved within an area are always, on the market, subject to devastating competition from other countries. This is increasingly true as civilization advances and transportation costs decline, thus subjecting local monopolies to ever greater threats of competition from other areas. Hence, any domestic monopoly will tend to reach out to restrict foreign competition and block efficient interregional trade: It is no wonder that the tariff used to be called "The Mother of Trusts."

    We might note here that on a truly free market there would be no need for any separate "theory of international trade." Nations become significant economically only with government intervention, either by way of monetary intervention or barriers to trade.
28. Monopolistic privileges to *businesses may* confer a monopoly price, depending on the elasticity of the firm's demand curve. Privileges to workers, on the other hand, *always* confer a higher, restrictionist price at lower than free-market output. The reason is that a business can expand or contract its production at will; if, then, a few firms are granted the privilege of producing in a certain field, they may expand production, if conditions are ripe, and *not* reduce total supply. On the other hand, aside from hours worked, which is not very flexible, restriction of entry into a labor market must *always* reduce the total supply of labor in that industry and therefore confer a restrictionist price. Of course, a *direct* restriction on production such as conservation laws always reduces supply and thereby confers a restrictionist price.
29. It will be more convenient to use dollars rather than gold ounces in this section; but we still assume complete equivalence of dollars and gold weights. We do not consider *monetary* intervention until the end of this chapter.
30. This does not mean that resources will flow directly out of jewelry and into paper. It is more likely that resources will flow into and out of industries similar to each other, occupationally and geographically, and that resources will readjust, step by step, from one industry to the next.

31. In the long run of the ERE, of course, all firms in all industries earn a uniform interest return, and the bulk of the gains or losses are imputed back to the original specific factors.
32. For a further discussion of the economic effects of taxation, see the next section below.
33. A fourth method, revenue from sale of governmental goods or services, is a peculiar form of taxation; at the very least, to *acquire* the original assets for this "business," taxation is needed.
34. In the less developed countries, where a money economy is still emerging from barter, any given amount of taxation will have a still more drastic effect: for it will make *monetary* incomes much less worthwhile and will shift people's efforts from trying to make money back to untaxed barter arrangements. Taxation can therefore decisively retard development from a barter to a monetary economy, or even reverse the process. *See* C. Lowell Harriss, "Public Finance" in Bernard F. Haley, ed., *A Survey of Contemporary Economics* (Homewood, Ill.: Richard D. Irwin, 1952), p. 264. For a practical application, *see* P. T. Bauer, "The Economic Development of Nigeria," *Journal of Political Economy,* October, 1955, pp. 400 ff.

    If any government taxes in *kind,* there is then no span of time between taxation and the extraction of physical resources from the private sector. Both take place in the same act.
35. For this shift to occur, the individual's *real* monetary assets must decline, not just the nominal amount in terms of money. If, then, instead of this tax, there is deflation in the society, and the value of the monetary unit increases roughly proportionately everywhere, then the *nominal* fall in each individual's money stock will not be a *real* fall, and hence effective time-preference ratios will remain unchanged. In the case of income taxation, deflation will not occur, since the government will spend the revenue rather than contract the money supply. (Even in the rare case where all the tax money is liquidated by the government, the individuals taxed will lose more than others and hence will lose some real monetary assets.)
36. Thus, cf. Irving and Herbert W. Fisher, *Constructive Income Taxation* (New York: Harper & Bros., 1942). "Double" is used in the sense of *two* instances, not arithmetically twice.
37. These economists generally conclude that not income, but only consumption, should be taxed as the only "real" income.
38. The bias in favor of investment, or "growth," as against present consumption, is similar to the conservationist attack on present consumption. What is so worthy about *future* consumption and so unworthy about consuming in the *present?* Perhaps what we have here is an illicit smuggling of the less rational aspects of the "Protestant ethic" into economic science. Of the many problems involved, we may mention one here: What nonarbitrary quantitative standards for thrift can the economist establish once the free market's decision is overridden?
39. This is true if we also disregard the grave conceptual difficulties of arriving at a definition of "income," in accounting for the imputed

monetary value of work done within a household, of averaging fluctuating incomes over various years, etc.

40. We are not here conceding that "costs" determine "prices." The general array of final prices determines the general array of cost prices, but *then* the viability of firms is determined by whether the price that people will pay for their particular products will be enough to cover the costs, which are determined throughout the market.

41. Ever since Adam Smith, economists have tried, fallaciously, to use the benefit principle to justify proportional, and even progressive, taxation, on the ground that people benefit "from society" in proportion, or even more than in proportion, to their incomes. But it is clear that the rich benefit *less* from such services as police protection, since they could more afford to pay for their own than the poor. And the rich derive no benefit from welfare expenditures. Therefore, the rich derive *fewer* benefits, absolutely, from government than the poor, and the benefit principle cannot be used to justify proportional or progressive taxation.

    But, it might be objected, can't we say that everyone derives proportional benefits to his income from "society," though not from government? In the first place, this cannot be established. In fact, the opposite argument would be more accurate: for since both A and B participate in society and its benefits, any differential income between A and B must be due to their own *particular* worths rather than to society. Certainly equal benefits from society cannot be used to imply a proportional tax. And, furthermore, even if the argument were true, by what legerdemain can we say that "society" is equivalent to the State? If A, B, C, producers on the market, benefit from each other's existence as "society," how can G, the government, use this fact to establish *its* claim to *their* wealth?

42. For a critique of this doctrine, *see* E. R. A. Seligman, *The Shifting and Incidence of Taxation* (New York: Macmillan, 1899), pp. 122–36.

43. Businessmen are particularly prone to this "passing on" argument—obviously in an attempt to convince consumers that *they* are really paying any tax on that industry. Yet the argument is clearly belied by the very zeal of each industry to have its taxes lowered and to fight against a tax increase. If taxes could really be shifted so easily and businessmen were simply unpaid collection agents for the government, they would never protest a tax on their industry. (Perhaps this is the reason why almost no businessmen have protested being collection agents for withholding taxes on their *workers!*)

44. It might be objected that the firms can pass along the sales tax because it is a *general* increase for all firms. Aside from the fact that no relevant general factor (supply, demand for money) has increased, the individual firm is still concerned only with its individual demand curve, and these curves have not shifted. A tax increase has done nothing to make a higher price *more profitable* than it was before.

45. Resources can now shift only from work into idleness (or into barter). This, of course, may and probably will happen; since, as we shall see

further, a sales tax is a tax on incomes, the rise in opportunity cost of leisure may push some workers into idleness and thereby lower the quantity of goods produced. To this extent, prices *will* eventually rise, although hardly in the smooth, immediate, proportionate way of "shifting." See the pioneering article by Harry Gunnison Brown, "The Incidence of a General Output or a General Sales Tax," reprinted in R. A. Musgrave and C. S. Shoup, eds., *Readings in the Economics of Taxation* (Homewood, Ill.: Richard D. Irwin, 1959), pp. 330–39. While this was the first modern attack on the fallacy that sales taxes are shifted forward, Brown unfortunately weakened the implications of this thesis toward the end of his article.

46. Of course, if the money supply is increased after a wage rise, and credit expanded, prices can be raised so that money wages are again not above their discounted marginal value products.

47. Mr. Frank Chodorov, in his *The Income Tax—Root of All Evil* (New York: Devin-Adair, 1954), fails to indicate what other type of tax would be "better" from a free-market point of view, than the income tax. It is clear from our discussion that there are few taxes indeed that will not be as bad as the income tax from the viewpoint of the free market. Certainly sales or excise taxation will not fill the bill.

    Mr. Chodorov, furthermore, is surely wrong when he terms income and inheritance taxes *unique* denials of the right of individual property. Any tax whatever infringes on property right, and there is nothing in an "indirect tax" which makes the infringement any less clear. It is true that an income tax forces the subject to keep records and disclose his personal dealings, thus imposing a further loss in his utility. The sales tax, however, also forces record-keeping; the difference again is one of degree rather than of kind, since here the directness covers only retail storekeepers instead of the bulk of the population.

48. Thus, even so eminent an economist as F. A. Hayek has recently written: "This scheme [the single tax] for the socialization of land is, in its logic, probably the most seductive and plausible of all socialist schemes. If the factual assumptions on which it is based were correct, i.e., if it were possible to distinguish clearly between the value of the 'permanent and indestructible powers' of the soil . . . and . . . the value due to . . . improvement . . . the argument for its adoption would be very strong." F. A. Hayek, *The Constitution of Liberty* (Chicago: University of Chicago Press, 1960), pp. 352–53. Also see a somewhat similar concession by the Austrian economist von Wieser. Friedrich Freiherr von Wieser, "The Theory of Urban Ground Rent" in Louise Sommer, ed., *Essays in European Economic Thought* (Princeton: D. van Nostrand, 1960), pp. 78 ff.

49. I do not know anyone who has brought out the productivity of landowners as clearly as Mr. Spencer Heath, an ex-Georgist. *See* Spencer Heath, *How Come That We Finance World Communism?* (mimeographed MS., New York; Science of Society Foundation, 1953); *id., Rejoinder to 'Vituperation Well Answered' by Mr. Mason Gaffney*

(New York; Science of Society Foundation, 1953); *id., Progress and Poverty Reviewed* (New York: The Freeman, 1952).

50. Spencer Heath comments on Henry George as follows: "Wherever the services of land owners are concerned he is firm in his dictum that *all* values are physical . . . In the exchange services performed by [landowners], their social distribution of sites and resources, no physical production is involved; hence he is unable to see that they are entitled to any share in the distribution of physical things and that the rent they receive . . . is but recompense for their non-coercive distributive or exchange services . . . He rules out all creation of values by the services performed in [land] distribution by free contract and exchange, which is the sole alternative to either a violent and disorderly or an arbitrary and tyrannical distribution of land." Heath, *Progress and Poverty Reviewed,* pp. 9–10.
51. For the effects of the "single tax" and for other criticisms, *see* Murray N. Rothbard, *The Single Tax: Economic and Moral Implications* (Irvington-on-Hudson: Foundation for Economic Education, 1957); Rothbard, "A Reply to Georgist Criticisms" (mimeographed MS., Foundation for Economic Education, 1957); and Frank H. Knight, "The Fallacies in the 'Single Tax,'" *The Freeman* (August 10, 1953), pp. 810–11. One of the more amusing objections is that of the dean of Georgist economists, Dr. Harry Gunnison Brown. Although the Georgists base much of their economic case on a sharp distinction between ownership of land and ownership of improvements on that land, Brown tries to refute the disruptive economic effects of the single tax by implicitly assuming that land and improvements are owned by the same people anyway! Actually, of course, the disruptive effects remain; vertical integration by individuals or firms does not remove the economic principle from either of the integrated stages of production. *See* Harry Gunnison Brown, "Foundations, Professors and 'Economic Education,'" *The American Journal of Economics and Sociology,* January, 1958, pp. 150–52.
52. Government expenditures are made from government revenue. In the preceding section we have dealt with the major source of governmental revenue, taxation. Below we shall deal with inflation, or money creation, and in the present section a discussion of government "enterprise" is included. For a brief treatment of the final major source of government revenue—borrowing from the public—see Appendix A below.
53. It may be objected that while bureaucrats may not be producers, other "Pauls" who receive subsidies on occasion are basically producers on the market. To the extent that they receive subsidies from the government, however, they are being nonproductive and living off the producers by compulsion. What is relevant, in short, is the extent to which they are in a *relation of State* to their fellow men. We might add that, in this work, the term "State" is never meant in an anthropomorphic manner. "State" really means people acting toward one another in a systematically "stateish" relationship.

I am indebted to Mr. Ralph Raico, of the University of Chicago, for the "relation of State" concept.

54. Originally, Professor Simon Kuznets contended that only *taxes* should gauge the government's productive output, thus measuring product by revenue as in the case of private firms. But taxes, being compulsory, cannot be used as a productive gauge. In contrast to the present method of national income accounting, Kuznets would have eliminated all government *deficits* from its "productive contribution."
55. Even for those who do not accept this analysis, any who believe, empirically, that waste in government exceeds 50% of its expenditures would have to agree that our assumption is more accurate than the current estimate of 100% productivity by the government.
56. If a waste asset owned by the government is sold to private enterprise, *then* all or part of it might become a capital good. But this potential does not make the good capital while used by the government. It might be objected that government purchases are genuine investments when used by a government "enterprise" that charges prices on the market. We shall see, however, that this is not really enterprise but *playing at* enterprise.

   See below for a more detailed discussion of the waste involved in waste assets.
57. This is to be distinguished from the classical concept of "nonproductive consumption" as all consumption above that needed to maintain the productive capacity of the laborer.
58. As Thomas Mackay aptly stated: "We can have exactly as many paupers as the country chooses to pay for." Thomas Mackay, *Methods of Social Reform* (London: John Murray, 1896), p. 210. Private charity to the poor, on the other hand, would not have the same vicious-circle effect, since the poor would not have a continuing compulsory claim on the rich. This is particularly true where private charity is given only to the "deserving" poor. On the nineteenth-century concept of the "deserving poor," cf. Barbara Wootton, *Social Science and Social Pathology* (London: George Allen and Unwin, 1959), pp. 51, 55, and 268 ff.
59. The reader may gauge from the following anecdote by an admirer of such a drive just *who* was the true friend of the poor organ-grinder—his customer or the government:

   "During a similar campaign to clean up the streets of organ-grinders (most of whom were simply licensed beggars) a woman came up to LaGuardia at a social function and begged him not to deprive her of her favorite organ-grinder.

   " 'Where do you live?' he asked her.

   " 'On Park Avenue!'

   "LaGuardia successfully pushed through his plan to eliminate the organ-grinders and the peddlers, despite the pleas of the penthouse slummers." Newbold Morris and Dana Lee Thomas, *Let the Chips Fall* (New York, 1955), pp. 119–20.
60. See Murray N. Rothbard, "Government in Business" in *Essays on Liberty* (Irvington-on-Hudson: Foundation for Economic Education,

1958), IV, 186 ff. It is therefore characteristic of government ownership and "enterprise" that the consumer becomes, not a "king" to be courted, but a troublesome fellow bent on using up the "social" product.

61. Thus, the government official may select a road that will yield him or his allies more votes.
62. Cf. Ludwig von Mises, *Bureaucracy* (New Haven: Yale University Press, 1946), pp. 50, 53.
63. Various fallacious criteria have been advanced for deciding between private and state action. One common rule is to weigh "marginal social costs" and benefits against "marginal private costs" and benefits. Apart from other flaws, there is no such entity as "society" separate from constituent individuals, so that this proferred criterion is simply meaningless.
64. See the interesting pamphlet by Frank Chodorov, *The Myth of the Post Office* (Hinsdale, Ill.: Henry Regnery Co., 1948). On a similar situation in England, *see* Frederick Millar, "The Evils of State Trading as Illustrated by the Post Office" in Thomas Mackay, ed., *A Plea for Liberty* (New York: D. Appleton Co., 1891), pp. 305–25. For a portrayal of the political factors that have systematically distorted economic considerations in setting postal rates in the United States, *see* Jane Kennedy, "Development of Postal Rates; 1845–1955," *Land Economics,* May, 1957, pp. 93–112; and Kennedy, "Structure and Policy in Postal Rates," *Journal of Political Economy,* June, 1957, pp. 185–208.
65. Only governments can make self-satisfied announcements of cuts in service in order to effect economies. In private business, economies must be made as corollaries to improvements in service. A recent example of a cut in government service—in the midst of improving private services in most other fields—was the decline in American postal deliveries from two to one a day, coupled, of course, with perennial requests for higher rates. When France nationalized the important Western Railway system in 1908, freight was increasingly damaged, trains slowed down, and accidents grew at such a pace that an economist caustically observed that the French government had added railway accidents to its growing list of monopolies. *See* Murray N. Rothbard, "The Railroads of France," *Ideas on Liberty,* September, 1955, p. 42.
66. Ironically enough, the higher fares have driven many customers to buying and driving their own cars, thus aggravating the perennial traffic problem (shortage of government street space) even further. Another example of government intervention creating and multiplying its own difficulties! On the subways, *see* Ludwig von Mises, "The Agony of the Welfare State," *The Freeman,* May 4, 1953, pp. 556–57.
67. It might be objected that individual stockholders of corporations cannot do this either, e.g., a General Motors stockholder is not allowed to seize a car in lieu of cash dividends or in exchange for his stock. Yet stockholders *do* own their company, and this example precisely proves our point. For the individual stockholder can contract out of his company; he can *sell* his aliquot shares of General Motors stock to someone else. The subject of government *cannot* contract out of that government; he

cannot sell his "shares" in the post office, for example, because he has no such shares. As F. A. Harper has succinctly stated: "The corollary of the right of ownership is the right of disownership. So if I cannot sell a thing, it is evident that I do not really own it." Harper, *op. cit.*, pp. 106, 32. Also *see* Isabel Paterson, *The God of the Machine* (New York: Putnam's, 1943), pp. 179 ff., and T. Robert Ingram, *Schools: Government or Public?* (Houston: St. Thomas Press, n.d.).

68. It might be noted that even if all the fallacious planks of the Henry George structure were conceded, the Single Tax program would still not follow from the premises. As Benjamin Tucker brilliantly demonstrated years ago, the most that could possibly be established would be *each man's* "right" to his tiny aliquot part of the site value of every plot of land—*not* the *State's* right to the whole value. Tucker, *Individual Liberty*, pp. 241–43.
69. Those who object that private individuals are mortal, while "governments are immortal," indulge in the fallacy of conceptual realism at its starkest. "Government" is not a real acting entity, but rather a type of interpersonal action adopted by actual individuals.
70. See the literature referred to in chap. 10, above, on the economics of socialism. Also John Jewkes, *Ordeal by Planning* (New York: Macmillan, 1948). For application to Soviet practice, *see* Boris Brutzkus, *Economic Planning in Soviet Russia* (London: Routledge, 1935) and such recent material as G. F. Ray, "Industrial Planning in Hungary," *Scottish Journal of Political Economy*, June, 1960; E. Stuart Kirby, "Economic Planning and Policy in Communist China," *International Affairs*, April, 1958; P. J. D. Wiles, "Changing Economic Thought in Poland," *Oxford Economic Papers*, June, 1957; Alec Nove, "The Politics of Economic Rationality," *Social Research*, Summer, 1958; and especially, Nove, "The Problem of 'Success Indicators' in Soviet Industry," *Economica*, February, 1958. See below on socialist planning in connection with growth and underdevelopment.
71. A chief difference is that a formal Communist-style expropriation makes it far more difficult to *desocialize* later.
72. The first one to point this out was Ludwig von Mises, in his *Human Action*, pp. 698–99. It is particularly interesting to find an empirical confirmation in Wiles, dealing with Communist planning: "What actually happens is that 'world prices,' i.e., *capitalist world prices*, are used in all intra-[Soviet] bloc trade. They are translated into rubles . . . and entered into bilateral clearing accounts. To the question, 'What would you do if there were no capitalist world?' came only the answer 'We'll cross that bridge when we come to it.' In the case of electricity the bridge is already under their feet; there has been great difficulty in pricing it since there is no world market." Wiles, *loc. cit.*, pp. 202–03. On the difficulties encountered by the Soviet bloc in using world market prices, *see especially* Horst Mendershausen, "The Terms of Soviet-Satellite Trade: A Broadened Analysis," *Review of Economics and Statistics*, May, 1960, pp. 152–63.

73. For an interesting account of the recent growth of organized private enterprises in Soviet Russia, illegal but protected by local graft, *see* Edward Crankshaw, "Breaking the Law in a Police State; Regimentation Can't Curb Russians' Anarchic Spirit," *New York Herald-Tribune,* August 17, 1960.

74. Recent researches have shown the fallacy of the common view that modern inventions and applied technological developments can take place only in very large-scale, even centrally planned, laboratories. See particularly the brilliant work of John Jewkes, David Sawers, and Richard Stillerman, *The Sources of Invention* (London: Macmillan Co., 1958). *Also see* John R. Baker, *Science and the Planned State* (New York: Macmillan Co., 1945). For a useful summary of recent literature in this field, *see* Richard R. Nelson, "The Economics of Invention: A Survey of the Literature," *The Journal of Business,* April, 1959, pp. 101–27. Soviet science has, of course, been able to copy the technical achievements of the West; yet, on the inefficiencies of Soviet science, *see* Baker, *op. cit.,* and Baker, *Science and the Sputniks* (London: Society for Freedom in Science, December, 1958). Of interest on the inherent inefficiencies of governmental military research is the Hoover Commission Task Force Report: Subcommittee of the Commission on Organization of the Executive Branch of Government, *Research Activities in the Department of Defense and Defense-Related Agencies* (Washington, D. C.: April, 1955). On atomic energy and government, *see,* in addition to Jewkes, Sawers, and Stillerman, Alfred Bornemann, "Atomic Energy and Enterprise Economics," *Land Economics,* August, 1954.

    Virtually the central theme of Hayek's *Constitution of Liberty* is the importance of freedom for innovations and progress, in the widest sense.

75. Two of the arguments for government activity most favored by economists are the "collective goods" and "external benefit" arguments. For a critique, see Appendix B below.

76. This is the first line of argument for government intervention analyzed in Appendix B below.

77. In many cases, these "investments" are not simply bureaucratic errors; they pay welcome gains to government officials in "prestige." Every "underdeveloped" government seems to insist on its steel mill or its dam, for example, regardless whether it is economic or not (therefore usually *not*). As Professor Friedman astutely points out: "The Pharaohs raised enormous sums of capital to build the Pyramids; this was capital formation on a grand scale; it certainly did not promote economic development in the fundamental sense of contributing to a self-sustaining growth in the standard of life of the Egyptian masses. Modern Egypt has under government auspices built a steel mill; this involves capital formation; but it is a drain on the economic resources of Egypt . . . since the cost of making steel in Egypt is very much greater than the cost of buying it elsewhere; it is simply a modern equivalent of the Pyramids, except that maintenance expenses are higher." Milton Friedman, "Foreign Economic Aid: Means and Objectives," *Yale Review,* Summer, 1958, p. 505.

78. Cf. L. M. Lachmann, *Capital and Its Structure, op. cit. Also see* P. T. Bauer and B. S. Yamey, *The Economics of Under-Developed Countries* (London: James Nisbet and Co., 1957), pp. 129 ff.
79. On the subject of compulsory saving and government investment, see the noteworthy article of P. T. Bauer, "The Political Economy of Non-Development" in James W. Wiggins and Helmut Schoeck, eds., *Foreign Aid Re-examined* (Washington, D. C.: Public Affairs Press, 1958), pp. 129–38. Bauer writes: " . . . if development has meaning as a desirable process, it must refer to an increase in *desired* output. Governmental collection and investment of saving effect production which is not subject to the test of voluntary purchase at market price . . . Increased output through this method is at best an ambiguous indicator of economic improvement . . . If the capital is not provided voluntarily, this suggests that the population prefers an alternative use of resources, whether current consumption or other forms of investment." *Ibid.*, pp. 133–34.
80. P. T. Bauer, *Economic Analysis and Policy in Underdeveloped Countries* (Duke University Press, 1957), pp. 113 ff. On Soviet economic growth Bauer and Yamey make this salutary comment: "The meaning of national income, industrial output and capital formation is also debatable in an economy when so large a part of output is not governed by consumers' choices in the market; the difficulties of interpretation are particularly obvious in connection with the huge capital expenditure undertaken by government without reference to the valuation of output by consumers." Bauer and Yamey, *op. cit.*, p. 162. *Also see* Friedman, "Foreign Economic Aid," *op. cit.*, p. 510.
81. For a critique of various metaphors illegitimately and misleadingly imported from the natural sciences into economics, *see* Rothbard, "The Mantle of Science," *loc. cit.*
82. The presumably excessive growth of cancerous cells, for example, is generally overlooked.
83. The prolific writings of Professor Bauer are a particularly fruitful source of analysis of the problems of the underdeveloped countries. In addition to the references above, *see* especially Bauer's excellent *United States Aid and Indian Economic Development* (Washington: American Enterprise Association, November, 1959); his *West African Trade* (Cambridge University Press, 1954); "Lewis' *Theory of Economic Growth*," *American Economic Review*, September, 1956, pp. 632–41; "A Reply," *Journal of Political Economy*, October, 1956, pp. 435–41; and P. T. Bauer and B. S. Yamey, "The Economics of Marketing Reform," *Journal of Political Economy*, June, 1954, pp. 210–34.

    The following quotation from Bauer's study on India is instructive for its analysis of central planning as well as development: "As a corollary of reserving a large (and increasing) sector of the economy for the government, private enterprise and investment, both Indian and foreign, are banned from a wide range of industrial and commercial activity. These restrictions and barriers affect not only private Indian investment, but also the entry of foreign capital, enterprise and skill, which inevitably retards economic development. Such measures are thus paradoxical in view of the alleged emphasis on economic advance." Bauer, *United States Aid, etc.,* p. 43.

Bauer's chief defect is a tendency to underweigh the role of capital in economic development.

84. It is fascinating to discover, in 1925–26, before Soviet Russia became committed to full socialism and coerced industrialization, Soviet leaders and economists attacking central planning and forced industry and calling for economic reliance on private peasantry. After 1926, however, the Soviet planned economy deliberately planned *uneconomically* for forced heavy industry in order to establish an autarkic socialism. *See* Edward H. Carr, *Socialism In One Country, 1924–1926* (New York: Macmillan Co., 1958), I, 259 f., 316, 351, 503–13. On the Hungarian experience, *see* Ray, *op. cit.,* pp. 134 ff.

85. Wiggins and Schoeck, *op. cit.,* p. v. This symposium has many illuminating articles on the whole problem of underdevelopment. In addition to the Bauer article cited above, see especially the contributions of Rippy, Groseclose, Stokes, Schoeck, Haberler and Wiggins. Also see the critique of the concept of underdevelopment in Jacob Viner, *International Trade and Economic Development* (Glencoe, Ill.: Free Press, 1952), pp. 120 ff.

86. W. W. Rostow, *The Stages of Economic Growth* (Cambridge University Press, 1960). Perhaps some of the popularity may be due to the term "take-off," which is certainly in tune with our aeronautical and space-minded age.

87. On the complex of fallacies involved in the search for "laws of history," *see* Ludwig von Mises, *Theory and History* (New Haven: Yale University Press, 1957); for a critique of earlier "stage theories" of economic history, see T. S. Ashton, "The Treatment of Capitalism by Historians" in F. A. Hayek, ed., *Capitalism and the Historians* (Chicago: University of Chicago Press, 1954), pp. 57–62. Some of the fallacies of the "social overhead" concept are refuted in Wilson Schmidt, "Social Overhead Mythology" in Wiggins and Schoeck, *op. cit.,* pp. 111–28, although Schmidt himself clings to several. On the superiority of private over government entrepreneurship and innovation, and its significance for development, *see* Yale Brozen, "Business Leadership and Technological Change," *American Journal of Economics and Sociology,* 1954, pp. 13–30; and Brozen, "Technological Change, Ideology and Productivity," *Political Science Quarterly,* December, 1955, pp. 522–42.

Another Rostow fallacy is the adoption of the late nineteenth-century German theory that a strong centralized state was a necessary precondition for the emergence of Western capitalism. For a partial critique, see Jelle C. Riemersma, "Economic Enterprise and Political Powers After the Reformation," *Economic Development and Cultural Change,* July, 1955, pp. 297–308.

Finally, for a keen and pioneering discussion of many aspects of coerced development, *see* S. Herbert Frankel, *The Economic Impact of Under-Developed Societies* (Oxford: Basil Blackwell, 1953). For a contrasting case study of the free-market road to development, *see* F. C. Benham, "The Growth of Manufacturing in Hong Kong," *International Affairs,* October, 1956, pp. 456–63.

88. For a critique of Rostow, stressing his mechanistic view of history and a technological determinism that neglects the vital *ideas* creating technology and political institutions, *see* David McCord Wright, "True Growth Must Come Through Freedom," *Fortune,* December, 1959, pp. 137–38, 209–12.
89. This performance leads one to believe that Schumpeter was right when he declared: ". . . capitalism stands its trial before judges who have the sentence of death in their pockets. They are going to pass it, whatever the defense they may hear; the only success victorious defense may produce is a change in the indictment." Schumpeter, *Capitalism, Socialism, and Democracy,* p. 144.
90. John Kenneth Galbraith, *The Affluent Society* (Boston: Houghton Mifflin Co., 1958).
91. "Fable for Our Times," *Wall Street Journal,* April 21, 1960, p. 12. Thus Galbraith, *op. cit.,* deplores the government's failure to "invest more" in scientists and scientific research to promote our growth, while also attacking American affluence. It turns out, however, that Galbraith wants more of precisely that kind of research which can have no possible commercial application.
92. Galbraith's major rhetorical device may be called "the sustained sneer," which includes (*a*) presenting an opposing argument so sardonically as to make it seem patently absurd, with no need for reasoned refutation; (*b*) coining and reiterating Veblenesque names of disparagement, e.g., "the conventional wisdom"; and (*c*) ridiculing the opposition further by psychological *ad hominem* attacks, i.e., accusing opponents of having a psychological vested interest in their absurd doctrines—this mode of attack being now more fashionable than older accusations of economic venality. The "conventional wisdom" encompasses just about everything with which Galbraith disagrees.
93. In addition to wicked advertising, wants are also artificially created, according to Galbraith, by emulation of one's neighbor: "Keeping up with the Joneses." But, in the first place, what is *wrong* with such emulation, except an unsupported ethical judgment of Galbraith's? Galbraith pretends to ground his theory, not on his private ethical judgment, but on the alleged creation of wants by production itself. Yet simple emulation would not be a function of producers, but of consumers themselves—unless emulation, too, were inspired by advertising. But this reduces to the criticism of advertising discussed in the text. And secondly, where did the original *Jones* obtain his wants? Regardless of how many people have wants purely in emulation of others, *some* person or persons must have originally had these wants as genuine needs of their very own. Otherwise the argument is hopelessly circular. Once this is conceded, it is impossible for economics to decide to what extent each want is pervaded by emulation.

94. For more on determinism and the sciences of human action, *see* Rothbard, "The Mantle of Science," *op. cit.*, and Mises, *Theory and History*.
95. Professor Abbott, in his important book on competition, quality of products, and the business system, put it this way: "The producers will generally find it easier and less costly to gain sales by adapting the product as closely as possible to existing tastes and by directing advertising to those whose wants it is already well equipped to satisfy than by attempting to alter human beings to fit the product." Abbott, *op. cit.*, p. 74.
96. Recent writings by marketing experts on "the marketing revolution" now under way stress precisely this increasing competition for, and courting of, the favor and custom of the consumer. Thus, *see* Robert J. Keith, "The Marketing Revolution," *Journal of Marketing*, January, 1960, pp. 35–38; Goldman, *loc. cit.*, and Goldman, "Marketing—a Lesson for Marx," *Harvard Business Review*, January–February, 1960, pp. 79–86.
97. On the alleged powers of business advertising, it is well to note these pungent comments of Ludwig von Mises: "It is a widespread fallacy that skillful advertising can talk the consumers into buying everything that the advertiser wants them to buy . . . However, nobody believes that any kind of advertising would have succeeded in making the candlemakers hold the field against the electric bulb, the horse-drivers against the motorcars, the goose quill against the steel pen and later against the fountain pen." *Human Action*, p. 317. For a critique of the notion of the "hidden persuaders," *see* Raymond A. Bauer, "Limits of Persuasion," *Harvard Business Review*, September–October, 1958, pp. 105–10.
98. Galbraith, *op. cit.*, p. 345. In proposing this large-scale creation of an intellectual class, Galbraith virtually ignores the artificiality of educating people beyond their interests, capacities, or job opportunities available.
99. Since this would take us far afield indeed, we can mention here only one reference: to the successful development of the road and canal networks of eighteenth-century England by private road, canal, and navigation improvement companies. *See* T. S. Ashton, *An Economic History of England: The 18th Century* (New York: Barnes and Noble, n.d.), pp. 72–81. On the fallacy of "collective goods," only suppliable by the government, see Appendix B below.
100. Amidst the tangle of Galbraith's remaining fallacies and errors, we might mention one: his curious implication that Professor von Mises is a businessman. For first Galbraith talks of the age-old hostility between businessmen and intellectuals, backs this statement by quoting Mises as critical of many intellectuals, and then concedes that "most businessmen" would regard Mises as "rather extreme." But since Mises is certainly not a businessman, it is odd to see his statements used as evidence for businessman-intellectual enmity. Galbraith, *op. cit.*, pp. 184–85. This peculiar error is shared by Galbraith's Harvard colleagues, whose work he cites favorably, and who persist in quoting such non-

businessmen as Henry Hazlitt and Dr. F. A. Harper as spokesmen for the "classical business creed." *See* Francis X. Sutton, Seymour E. Harris, Carl Kaysen, and James Tobin, *The American Business Creed* (Cambridge: Harvard University Press, 1956).

The Affluent Society is a work that particularly lends itself to satire, and this has been cleverly supplied in "The Sumptuary Manifesto," *The Journal of Law and Economics,* October, 1959, pp. 120–23.

101. See pp. 819 ff. of this chapter.

102. A brief, and therefore bald, version of Galbraith's thesis may be found in John Kenneth Galbraith, "Use of Income That Economic Growth Makes Possible . . ." in *Problems of United States Economic Development* (New York: Committee for Economic Development, January, 1958), pp. 201–06. In the same collection of essays there is in some ways a more extreme statement of the same position by Professor Moses Abramovitz, who presses even further to denounce *leisure* as threatening to deprive us of that "modicum of purposive, disciplined activity which . . . gives savor to our lives." Moses Abramovitz, "Economic Goals and Social Welfare in the Next Generation," *ibid.,* p. 195. It is perhaps apropos to note a strong resemblance between coerced deprivation of leisure and slavery, as well as to remark that the only society that can genuinely "invest in men" is a society where slavery abounds. In fact, Galbraith writes almost wistfully of a slave system for this reason. *The Affluent Society,* pp. 274–75.

In addition to Galbraith and Abramovitz, other "Galbraithian" papers in the CED Symposium are those of Professor David Riesman and especially Sir Roy Harrod, who is angry at "touts," the British brand of advertiser. Like Galbraith, Harrod would also launch a massive government education program to "teach" people how to use their leisure in the properly refined and esthetic manner. This contrasts to Abramovitz, who would substitute a bracing discipline of work for expanding leisure. But then again, one suspects that the bulk of the people would find a coerced Harrodian esthetic just as disciplinary. *Problems of United States Economic Development,* I, 207–13, 223–34.

103. Hayek, *The Constitution of Liberty,* pp. 42 ff. As Hayek puts it: "A large part of the expenditure of the rich, though not intended for that end, thus serves to defray the cost of the experimentation with the new things that, as a result, can later be made available to the poor.

"The important point is not merely that we gradually learn to make cheaply on a large scale what we already know how to make expensively in small quantities but that only from an advanced position does the next range of desires and possibilities become visible, so that the selection of new goals and the effort toward their achievement will begin long before the majority can strive for them." *Ibid.,* pp. 43–44. Also see the similar point made by Mises thirty years before. Ludwig von Mises, "The Nationalization of Credit" in Sommer, *op. cit.,* pp. 111 f. And *see* Bertrand De Jouvenel, *The Ethics of Redistribution* (Cambridge: Cambridge University Press, 1952), pp. 38 f.

104. *Ibid.,* especially pp. 67 ff. If all housewives suddenly stopped doing their own housework and, instead, hired themselves out to their next-door neighbors, the supposed increase in national product, as measured by statistics, would be very great, even though the actual increase would be nil. For more on this point, *see* De Jouvenel, "The Political Economy of Gratuity," *The Virginia Quarterly Review,* Autumn, 1959, pp. 515 ff.
105. Although it has obvious third-person effects, this type of intervention is essentially binary because the issuer, or intervener, gains at the expense of individual holders of legitimate money. The "lines of force" radiate from the interveners to each of those who suffer losses.
106. Inflation, in this work, is explicitly defined to exclude increases in the stock of specie. While these increases have such similar effects as raising the prices of goods, they also differ sharply in other effects: (*a*) simple increases in specie do not constitute an intervention in the free market, penalizing one group and subsidizing another; and (*b*) they do not lead to the processes of the business cycle.
107. Cf. Mises, *The Theory of Money and Credit,* pp. 140–42.
108. The avowed goal of Keynes' inflationist program was the "euthanasia of the rentier." Did Keynes realize that he was advocating the not-so-merciful annihilation of some of the most unfit-for-labor groups in the entire population—groups whose marginal value productivity consisted almost exclusively in their savings? Keynes, *General Theory, etc.,* p. 376.
109. For an interesting discussion of some aspects of the accounting error, *see* W. T. Baxter, "The Accountant's Contribution to the Trade Cycle," *Economica,* May, 1955, pp. 99–112. *Also see* Mises, *Theory of Money and Credit,* pp. 202–04; *Human Action,* pp. 546 f.
110. To the extent that the new money is loaned to *consumers* rather than businesses, the cycle effects discussed in this section do not occur.
111. *See* Mises, *Human Action,* p. 557.
112. Since Knut Wicksell is one of the fathers of this business-cycle approach, it is important to stress that our usage of "natural rate" differs from his. Wicksell's "natural rate" was akin to our "free-market rate"; our "natural rate" is the rate of return earned by businesses on the existing market without considering loan interest. It corresponds to what has been misleadingly called the "normal profit rate," but is actually the basic rate of interest. See chapter 6 above.
113. If some readers are tempted to ask why credit contraction will not lead to the opposite type of malinvestment to that of the boom—overinvestment in lower-order capital goods and underinvestment in higher-order goods—the answer is that there is no arbitrary choice open of investing in higher-order or lower-order goods. Increased investment *must* be made in the higher-order goods—in lengthening the structure of production. A decreased amount of investment simply cuts down on higher-order investment. There will thus be no excess of investment in the lower orders, but simply a shorter structure than would otherwise be the case. Contraction, unlike expansion, does not create positive malinvestments.

114. If the economy is on a gold or silver standard, then many advocates of a free market will argue for credit contraction for the following additional reasons: (*a*) to preserve the principle of paying one's contractual obligations and (*b*) to punish the banks for their expansion and force them back toward a 100%-specie reserve policy.
115. Mises first presented the "Austrian theory" in a notable section of his *Theory of Money and Credit,* pp. 346–66. For a more developed statement, see his *Human Action,* pp. 547–83. For F. A. Hayek's important contributions, see especially his *Prices and Production,* and also his *Monetary Theory and the Trade Cycle* (London, 1933), and *Profits, Interest, and Investment.* Other works in the Misesian tradition include Robbins, *The Great Depression,* and Fritz Machlup, *The Stock Market, Credit, and Capital Formation* (New York: Macmillan, 1940).
116. *See* Mises, *Human Action,* pp. 577–78; and Hayek, *Prices and Production,* pp. 96–99.
117. Perhaps one reason for continuing confidence in the banking system is that people generally believe that fraud is prosecuted by the government and that, therefore, any practice *not* so prosecuted must be sound. Governments, indeed (as we shall see below), always go out of their way to bolster the banking system.
118. All this, of course, assumes no further government intervention in banking than permitting fractional reserve banking. Since the advent of deposit "insurance" during the New Deal, for example, the bank-run limitation has been virtually eliminated by this act of special privilege.
119. In the consolidated balance of payments of the clients, money income from sales to nonclients (exports) will decline, and money expenditures on the goods and services of nonclients (imports) will increase. The excess cash balances of the clients are transferred to nonclients.
120. Older economists also distinguished an "internal drain" as well as the "external drain," but included in the former only the drain from bank users to those who insist on standard money.
121. See *Human Action,* pp. 434–35.
122. For various views on free and central banking, *see* Vera C. Smith, *The Rationale of Central Banking* (London: P. S. King and Son, 1936).
123. *Human Action,* p. 444.
124. Amasa Walker, *op. cit.,* pp. 230–31.
125. There is a fourth way by which a central bank may increase bank reserves: in countries, such as the United States, where banks must keep a legally required minimum ratio of reserves to deposits, the bank may simply lower the required ratio.
126. Foreign central banks and governments are still permitted to redeem in gold bullion, but this is hardly a consolation for either foreign *citizens* or Americans. The result is that gold is still an ultimate "balancing" item between national governments, and therefore a kind of medium of exchange *for governments* and central banks in international transactions.
127. The transition from gold to fiat money will be greatly smoothed if the State has previously abandoned ounces, grams, grains, and other units

of weight in naming its monetary units and substituted unique names, such as dollar, mark, franc, etc. It will then be far easier to eliminate the public's association of monetary units with *weight* and to teach the public to value the *names themselves.* Furthermore, if each national government sponsors its own unique name, it will be far easier for each State to control its own fiat issue absolutely.

128. Cf. the analysis by John Maynard Keynes in his *A Tract on Monetary Reform* (London: Macmillan, 1923), ch. ii, section 1.
129. On runaway inflation, *see* Mises, *Theory of Money and Credit,* pp. 227–31.
130. Costantino Bresciani-Turroni, *The Economics of Inflation* (London: George Allen and Unwin, 1937), is a brilliant and definitive work on the German inflation.
131. Inflation is here defined as *any* increase in the money supply greater than an increase in specie, not as a *big* change in that supply. As here defined, therefore, the terms "inflation" and "deflation" *are* praxeological categories. *See* Mises, *Human Action,* pp. 419–20. But also see Mises' remarks in Aaron Director, ed., *Defense, Controls, and Inflation* (Chicago: University of Chicago Press, 1952), p. 3 n.
132. *See* George Ferdinand, "Review of Albert G. Hart, *Defense without Inflation,*" *Christian Economics,* Vol. III, No. 19 (October 23, 1951).
133. *See* Mises in Director, *op. cit.,* p. 334.
134. See section 8F above.
135. A recent objection of this sort appears in James M. Buchanan, *Public Principles of Public Debt* (Homewood, Ill.: Richard D. Irwin, 1958), especially pp. 104–05.
136. It is incorrect, however, to say that government loans are "riskless" and therefore that the interest yield on government bonds may be taken to be the pure interest rate. Governments may always repudiate their obligations if they wish, or they may be overturned and their successors may refuse to honor the IOU's.
137. Hence, despite Buchanan's criticism, the classical economists such as Mill were right: the public debt is a *double* burden on the free market; in the present, because resources are withdrawn from private to unproductive governmental employment; and in the future, when private citizens are taxed to pay the debt. Indeed, for Buchanan to be right, and the public debt to be no burden, two extreme conditions would have to be met: (1) the bondholder would have to tear up his bond, so that the loan would be a genuinely voluntary contribution to the government; *and* (2) the government would have to be a totally voluntary institution, subsisting on voluntary payments alone, not just for this particular debt, but for all its transactions with the rest of society. Cf. Buchanan, *op. cit.*
138. In the same way, we would have to assert that the Jews killed by the Nazis during World War II really committed suicide: "They did it to themselves."

139. For the rare exception of a libertarian who recognizes the merit of repudiation from a free-market point of view, *see* Frank Chodorov, "Don't Buy Bonds," *analysis,* Vol. IV, No. 9 (July, 1948), pp. 1–2.
140. One venerable example, used constantly in texts on public finance (an area particularly prone to camouflaged ethical judgments) is the "canons of justice" for taxation propounded by Adam Smith. For a critique of these supposedly "self-evident" canons, *see* Rothbard, "The Mantle of Science," *loc. cit.*
141. The analysis of the economic nature and consequences of government ownership in this book is *wertfrei* and does not involve ethical judgments. It is a mistake, for example, to believe that anyone, knowing the economic laws demonstrating the great inefficiencies of government ownership, would *necessarily* have to choose private over government ownership, although, of course, he may well do so. Those who place a high moral value, for example, on social conflict or on poverty or on inefficiency, or those who greatly desire to wield bureaucratic power over others (or to see people subjected to bureaucratic power) may well opt even more enthusiastically for government ownership. Ultimate ethical principles and choices are outside the scope of this book. This, of course, does not mean that the present author deprecates their importance. On the contrary, he believes that ethics *is* a rational discipline.
142. Thus, cf. Molinari, *op. cit.,* pp. 47–95.
143. *Ibid.,* p. 63. On the fallacy of collective goods, *see* S. R., "Spencer As His Own Critic," *Liberty,* June, 1904, and Merlin H. Hunter and Harry K. Allen, *Principles of Public Finance* (New York: Harpers, 1940), p. 22. Molinari had not always believed in the existence of "collective goods," as can be seen from his remarkable "De la production de la sécurité," *Journal des Economistes,* February 15, 1849, and Molinari, "Onzième soirée" in *Les soirées de la Rue Saint Lazare* (Paris, 1849).
144. Antonio De Viti De Marco, *First Principles of Public Finance* (London: Jonathan Cape, 1936), pp. 37–41. Similar to De Viti's first category is Baumol's attempted criterion of "jointly" financed goods, for a critique of which *see* Rothbard, "Toward A Reconstruction of Utility and Welfare Economics," *op. cit.,* pp. 255–60.
145. Paul A. Samuelson, "The Pure Theory of Public Expenditures," *Review of Economics and Statistics* (November, 1954), pp. 387–89.
146. Stephen Enke, "More on the Misuse of Mathematics in Economics: A Rejoinder," *Review of Economics and Statistics,* May, 1955, pp. 131–33; Julius Margolis, "A Comment On the Pure Theory of Public Expenditures," *Review of Economics and Statistics,* November, 1955, pp. 347–49. In his reply to critics, Samuelson, after hastening to deny any possible implication that he wished to *confine* the sphere of government to collective goods alone, asserts that his category is really a "polar" concept. Goods in the real world are supposed to be only blends of the "polar extremes" of public and private goods. But these concepts, even in Samuelson's own terms, are decidedly not polar, but exhaustive. Either A's consumption of a good diminishes B's possible consumption, or it does

not: these two alternatives are mutually exclusive and exhaust the possibilities. In effect, Samuelson has abandoned his category either as a theoretical or as a practical device. Paul A. Samuelson, "Diagrammatic Exposition of a Theory of Public Expenditure," *Review of Economics and Statistics,* November, 1955, pp. 350–56.

147. Charles M. Tiebout, "A Pure Theory of Local Expenditures," *Journal of Political Economy,* October, 1956, pp. 416–24. At one point, Tiebout seems to admit that his theory would be valid only if each person could somehow be "his own municipal government." *Ibid.,* p. 421.

In the course of an acute critique of the idea of competition in government, the Colorado Springs *Gazette-Telegraph* wrote as follows: "Were the taxpayer free to act as a customer, buying only those services he deemed useful to himself and which were priced within his reach, then this competition between governments would be a wonderful thing. But because the taxpayer is not a customer, but only the governed, he is not free to choose. He is only compelled to pay . . . With government there is no producer-customer relationship. There is only the relation that always exists between those who rule and those who are ruled. The ruled are never free to refuse the services of the products of the ruler . . . Instead of trying to see which government could best serve the governed, each government began to vie with every other government on the basis of its tax collections . . . The victim of this competition is always the taxpayer . . . The taxpayer is now set upon by the federal, state, school board, county and city governments. Each of these is competing for the last dollar he has." Colorado-Springs *Gazette-Telegraph,* July 16, 1958.

148. The problem of "external costs," usually treated as symmetrical with external benefits, is not really related: it is a consequence of failure to enforce fully the rights of property. If A's actions injure B's property, and the government refuses to stop the act and enforce damages, property rights and hence the free market are not being fully defended and maintained. Hence, external costs (e.g., smoke damage) are failures to maintain a fully free market, rather than *defects of* that market. *See* Mises, *Human Action,* pp. 650–53; and De Jouvenel, "The Political Economy of Gratuity," *op. cit.,* pp. 522–26.

149. For some unexplained reason, the benefits worried over are only the *indirect* ones, where B benefits inadvertently from A's action. Direct *gifts,* or charity, where A simply donates money to B, are not attacked under the category of external benefits.

150. "If my neighbors hire private watchmen they benefit me indirectly and incidentally. If my neighbors build fine houses or cultivate gardens, they indirectly minister to my leisure. Are they entitled to tax me for these benefits because I cannot 'surrender' them?" S.R., "Spencer As His Own Critic," *loc. cit.*

151. There is justice as well as bluntness in Benjamin Tucker's criticism: " 'What gives value to land?' asks Rev. Hugh O. Pentecost [a Georgist]. And he answers: 'The presence of population—the community. Then rent, or the value of land, morally belongs to the community.' What

gives value to Mr. Pentecost's preaching? The presence of population —the community. Then Mr. Pentecost's salary, or the value of his preaching, morally belongs to the community." Tucker, *Instead of a Book,* p. 357.

152. As Mises states: ". . . the means which a government needs in order to run a plant at a loss or to subsidize an unprofitable project must be withdrawn either from the taxpayers' spending and investing power or from the loan market . . . What the government spends more, the public spends less. Public works . . . are paid for by funds taken away from the citizens. If the government had not interfered, the citizens would have employed them for the realization of profit-promising projects the realization of which is neglected merely on account of the government's intervention. Yet this nonrealized project would have been profitable, i.e., it would have employed the scarce means of production in accordance with the most urgent needs of the consumers. From the point of view of the consumers the employment of these means of production for the realization of an unprofitable project is wasteful. It deprives them of satisfactions which they prefer to those which the government-sponsored project can furnish them." Mises, *Human Action,* p. 655.

Ellis and Fellner, in their discussion of external economies, ignore the primordial fact that the subsidization of these economies must be at the expense of funds usable for greater satisfactions elsewhere. Ellis and Fellner do not realize that their refutation of the Pigou thesis that increasing-cost industries are over-expanded destroys any possible basis for a subsidy to the decreasing-cost industries. Howard S. Ellis and William Fellner, "External Economies and Diseconomies" in *Readings in Price Theory* (Chicago: Blakiston Co., 1952), pp. 242–63.

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